CHAMBERLAIN®

ELITE™

Instruction Manual

CSW200UL™ SERIES

HIGH TRAFFIC COMMERCIAL GATE OPERATOR

UL325 compliant **UL991** compliant

c UL US LISTED

installation instructions and manual book
for architects, general contractors and dealers

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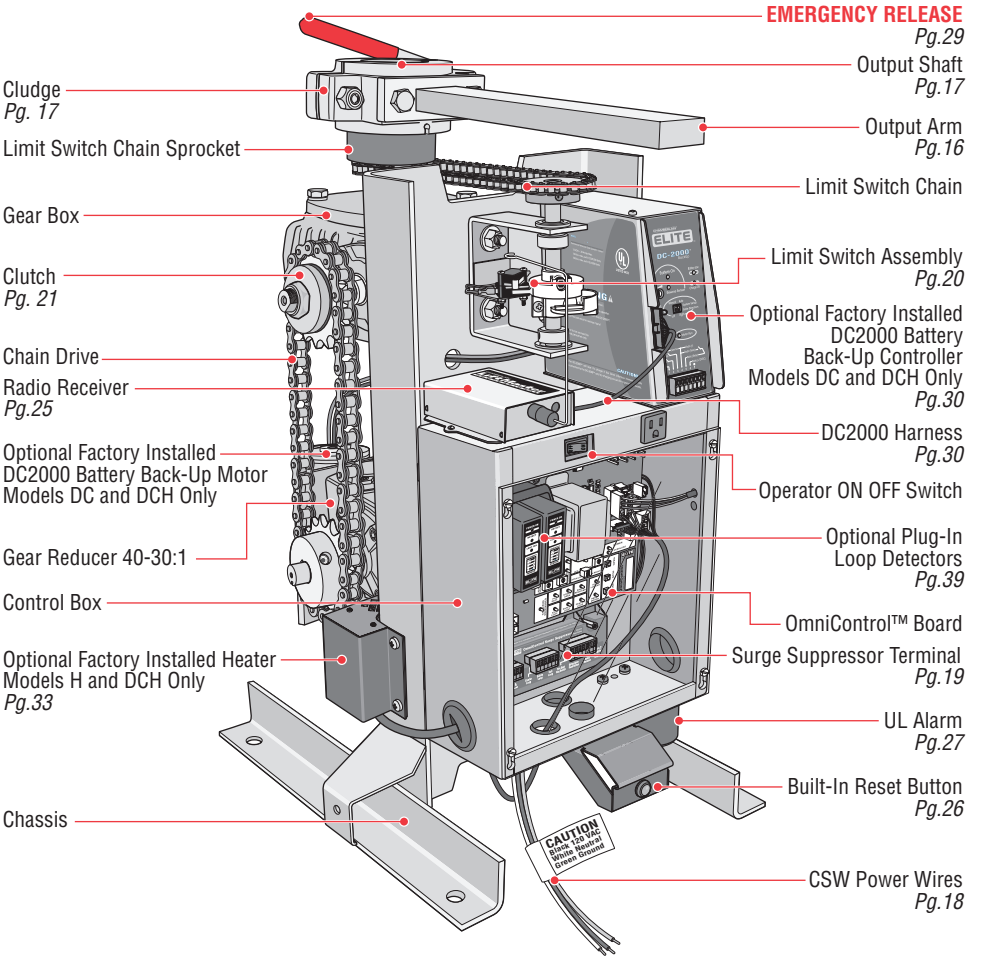
CSW200UL™
Overview



CHAMBERLAIN®
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LISTED

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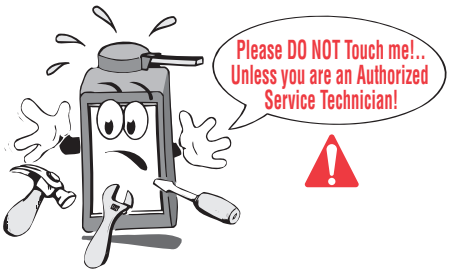

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For Technical Support: **1-800-528-2806**

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ROLE OF SPECIFIERS AND DESIGNERS

Specifiers and designers should design an automatic vehicular gate system to:

- Incorporate UL 325 compliant equipment.
- Utilize an operator suited for gate system type, size, frequency of use, location and user population. (Refer to UL 325 for usage class definitions)
- Separate pedestrian access from vehicle access.
- Reduce or eliminate pinch points.
- Reduce risk of entrapment injuries by minimizing all gaps in the gate and enclosing the area of the travel of the gate.
- Secure controls from unauthorized use.
- Locate all controls out of reach from the gate.
- Allow the user full view of the gate when operating.
- Consider special populations, such as children or the elderly.
- Conspicuously display all warnings and instructions.
- Be consistent with DASMA's Automatic Gate Opener System Safety Guide.

ROLE OF DEALERS, INSTALLERS AND TRAINED GATE SYSTEM TECHNICIANS

Installers, during the course of the installation proceedings for each job, should:

- Confirm the gate operator being installed is appropriate for the application.
- Confirm the gate is designed and built according to current published industry standards.
- Confirm all appropriate features and accessory devices are being incorporated, including both primary and secondary entrapment protection devices.
- Make sure the gate works freely before installing the operator.
- Repair or service worn or damaged gate hardware before installing the operator.
- Adjust the operator clutch or load-sensing device to the minimum force setting that allows reliable gate operation.
- Install operator inside fence line (DO NOT install operator on public side of fence line)
- Install a proper electrical ground to a gate operator.
- Install keypad controls where users cannot touch, or reach through gate while operating controls.
- Install controls where user has full view of gate operation.
- Install all warning signs (In accordance with UL 325) on both sides of the gate to warn persons in the area of potential hazards associated with automatic vehicular gate operation.
- Test all features for proper functions before placing the automatic vehicular gate into service.
- Demonstrate the basic functions and safety features of the gate system to owners/end users/general contractors, including how to turn off power and how to operate the manual disconnect feature.
- Leave safety instructions, product literature, installation manual and maintenance manual with end user.
- Explain to the owners the importance of a service contract that includes a routine re-testing of the entire system including the entrapment protection devices, and explain the need for the owners to insure that this testing is performed routinely.
- Offer the owner/end user a maintenance contract, or contact them regularly to offer maintenance.

ROLE OF END USERS/HOME OWNER

End users should be made aware that they must:

- Contact a trained gate systems technician to maintain and repair the gate system. (End users should never attempt to repair the gate)
- Retain and utilize the installation and maintenance manual and safety instructions.
- Routinely check all gate operator functions and gate movement.
- Discontinue use if safety systems operate improperly, the gate is damaged, or the gate is difficult to move.
- Never over tighten the operator clutch on load sensing device to compensate for a damaged or stiff operating gate.
- Prominently display and maintain warning signs on both sides of the gate.
- Keep all obstructions clear of the vicinity of the path of the gate system.
- Actively discourage pedestrian use of the vehicular gate operating system.
- Prevent anyone from playing near any part of the gate system.
- Never allow anyone to climb under, over or through a gate or the adjacent fence area.
- Never allow children to operate gate
- Keep portable controls out of reach of children.
- Never allow anyone to install an operating control within reach of the gate.
- Always be certain the gate area is clear of pedestrians before operating the gate.

SWING GATE SYSTEMS

- Entrapment Zone Hazard - Body parts may become entrapped between a gate and a stationary object when the gate begins to move, which can result in serious injury or death. Pedestrians must stay clear of the gate path, and any area where gate motion is close to stationary objects.

- Pinch Points Hazard - The opening mechanism may have arms that can overlap with a scissoring effect, which can result in serious injury. Pedestrians must stay clear of the opening mechanism at all times, particularly when gate is opening.

  Be sure that warning signs are prominently displayed on both sides of the gate and any other place where danger exists.

Installation Instructions regarding the CSW200UL™

A) Install the gate operator only when:

1) The operator is appropriate for the construction and the usage class of the gate.

2) All exposed pinch points are eliminated or guarded.

B) The operator is intended for installation only on gates used for vehicles. Pedestrians must be supplied with a separate access opening.

C) The gate must be installed in a location so that enough clearance is supplied between the gate and adjacent structures when opening and closing to reduce the risk of entrapment. Swinging gates shall not open into public access areas.

D) The gate must be properly installed and work freely in both directions prior to the installation of the gate operator. Do not over-tighten the operator clutch to compensate for a damaged gate.

E) Controls must be far enough from the gate so the user is prevented from coming in contact with the gate while operating the controls. Controls intended to be used to reset an operator after 2 sequential activations of the entrapment protection device or devices must be located in the line of sight of the outdoor gate or easily accessible controls shall have a security feature to prevent unauthorized use.

F) All warning signs and placards must be installed where visible in the area of the gate. A minimum of two placards must be installed. A placard is to be installed in the area of each side of the gate and be visible to persons located on the side of the gate on which the placard is installed.

G) For a gate operator utilizing a non-contact sensor such as a photo beam:

1) See instructions on the placement of non-contact sensor for each type of application.

2) Care shall be exercised to reduce the risk of nuisance tripping, such as when a vehicle trips the sensor while the gate is still moving.

3) One or more non-contact sensors shall be located where the risk of entrapment or obstruction exists, such as the perimeter reachable by a moving gate or barrier.

H) For a gate operator utilizing a contact sensor such as an edge sensor:

1) A hardwired contact sensor shall be located and its wiring arranged so that the communication between the sensor and the gate operator is not subjected to mechanical damage.

2) A wireless contact sensor such as the one that transmits radio frequency (RF) signals to the gate operator for entrapment protection functions shall be located where the transmission of the signals are not obstructed or impeded by building structures, natural landscaping or similar obstruction. A wireless contact sensor shall function under the intended end-use conditions.

3) One or more contact sensors shall be located on the inside and outside leading edge of a swing gate. Additionally, if the bottom edge of a swing gate is greater than 6 inches (152 mm) above the ground at any point in its arc of travel, one or more contact sensors shall be located on the bottom edge.

Important Safety Instructions

WARNING ***- To reduce the risk of injury or death:***

1) ***READ AND FOLLOW ALL INSTRUCTIONS.***

2) ***Never*** let children operate or play with gate controls. Keep the remote control away from children.

3) ***Always keep people and objects away from the gate.***
NO ONE SHOULD CROSS THE PATH OF THE MOVING GATE.

4) Test the gate operator monthly. The gate MUST reverse on contact with a rigid object or stop when an object activates the non-contact sensors. After adjusting the force or the limit of travel, retest the gate operator, Failure to adjust and retest the gate operator properly can increase the risk of injury or death.

5) Use the emergency release only when the gate is not moving. Make sure the power for the gate operator is off.

6) ***KEEP GATES PROPERLY MAINTAINED.*** Read the manual. Have a qualified service person make repairs to the gate or gate hardware.

7) ***The entrance is for vehicles only. Pedestrians must use separate entrance.***

8) ***SAVE THESE INSTRUCTIONS.***

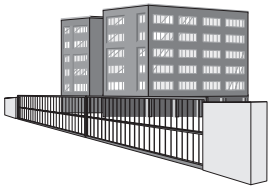
UL Definition of Terms

Gate – A moving barrier such as a swinging, sliding, raising lowering, rolling, or like, barrier, that is a stand-alone passage barrier or is that portion of a wall or fence system that controls entrance and/or egress by persons or vehicles and completes the perimeter of a defined area.

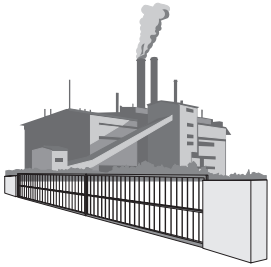
Vehicular swing-gate operator (or system) – A vehicular gate operator (or system) that controls a gate which swings in an arc in a horizontal plane that is intended for use for vehicular entrance or exit to a drive, parking lot, or the like.

UL Gate Classifications

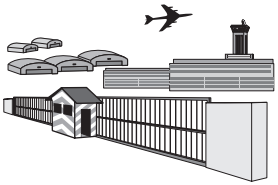
Class I – Residential vehicular gate operator
A vehicular gate operator (or system) intended for use in a home of one-to four single family dwelling, or a garage or parking area associated therewith.



Class II – Commercial/General access vehicular gate operator
A vehicular gate operator (or system) intended for use in a commercial location or building such as a multi-family housing unit (five or more single family units) hotel, garages, retail store or other building servicing the general public.



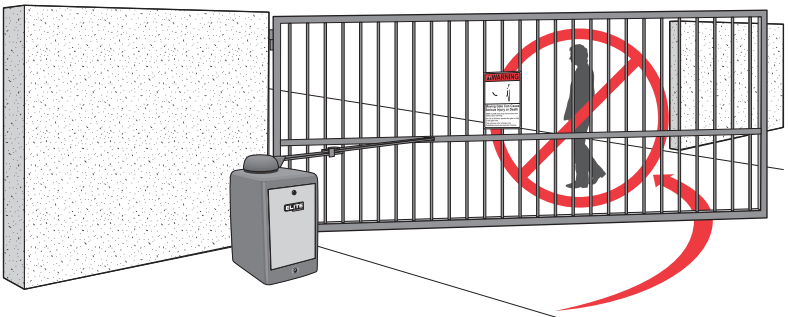
Class III – Commercial/General access vehicular gate operator
A vehicular gate operator (or system) intended for use in a industrial location or building such as a factory or loading dock area or other locations not intended to service the general public.



Class IV – Restricted access vehicular gate operator
A vehicular gate operator (or system) intended for use in a guarded industrial location or building such as an airport security area or other restricted access locations not servicing the general public, in which unauthorized access is prevented via supervision by security personnel.

The CSW200UL™ is for Vehicular Gate Use Only!

NOT **for use on any Pedestrian: Gateways, Doorways or Passageways.**



Property owners must never let pedestrians cross the path of a moving gate!

Property owners must never mount any gate operating device accessible through the gate!

Property owners must never let anyone hang or ride on the gate!

RECOMMENDED SETUP

All "Pinch Points" MUST have protective safety devices.

Warning Signs Attached on Both Sides of Gate
4" Max. Width
WARNING
Moving Gate Can Cause Serious Injury or Death
Edge Sensors
Gate Attachment Bar Must Go Completely Across the Gate for Full Strength
ELITE
Warning Sign Clearly Visible on Operator

⚠Pedestrians Must have a Separate Walkway!

SPECIFICATIONS

CSW200UL™, CSW200ULDC™
CSW200ULH™, CSW200ULDCH™

1/2 hp Motor, 120 Vac, 4 Amp.
Maximum Gate Length – **20 ft.**
Maximum Gate Weight – **600 lbs.**
Maximum Pull – **125 lbs.**

CSW200ULST™, CSW200ULSTDC™
CSW200ULSTH™, CSW200ULSTDCH™

1/2 hp Motor, 120 Vac, 4 Amp.
Maximum Gate Length – **20 ft.**
Maximum Gate Weight – **600 lbs.**
Maximum Pull – **125 lbs.**

CSW200ULDM™, CSW200ULDMDC™
CSW200ULDMH™, CSW200ULDMDCH™

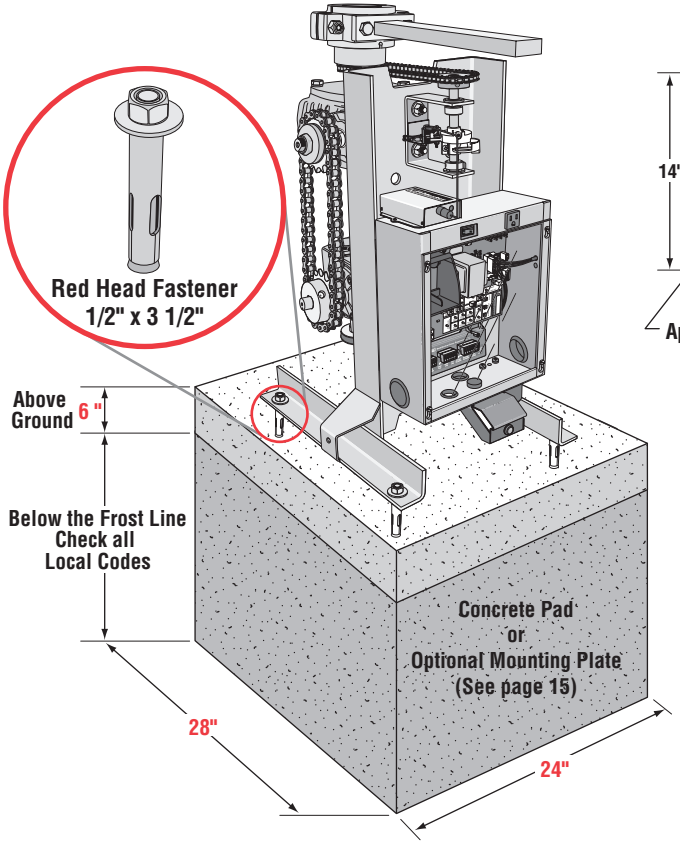
Two-1/2 hp Motors, 120 Vac, 4 Amp.
Maximum Gate Length – **20 ft.**
Maximum Gate Weight – **800 lbs.**
Maximum Pull – **115 lbs.**

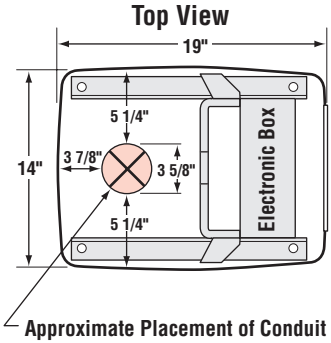
CSW200UL1HP™
CSW200UL1HPH™

Two-1/2 hp Motors, 120 Vac, 7.9 Amps.
Maximum Gate Length – **22 ft.**
Maximum Gate Weight – **1000 lbs.**
Maximum Pull – **250 lbs.**

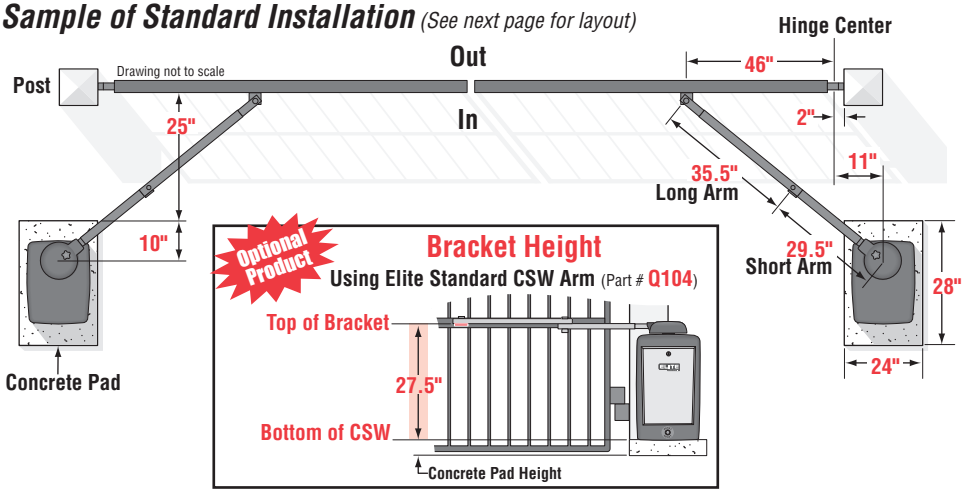
DM-Dual Motor ***1HP***-One Horse power ***H***-Factory Installed Heater ***DC***-Factory Installed DC2000 Backup System

Be sure to read and follow all Chamberlain Elite and UL instructions before installing and operating any Chamberlain Elite products. the Chamberlain Group, Inc is not responsible for improper installations or failure to comply with local building codes.





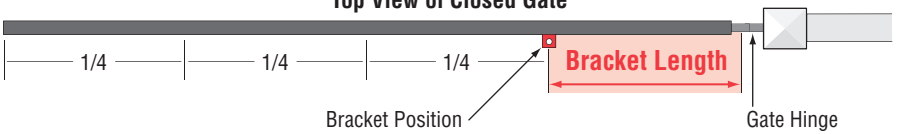
Sample of Standard Installation *(See next page for layout)*



Sample Installation is Shown on Previous Page.

1

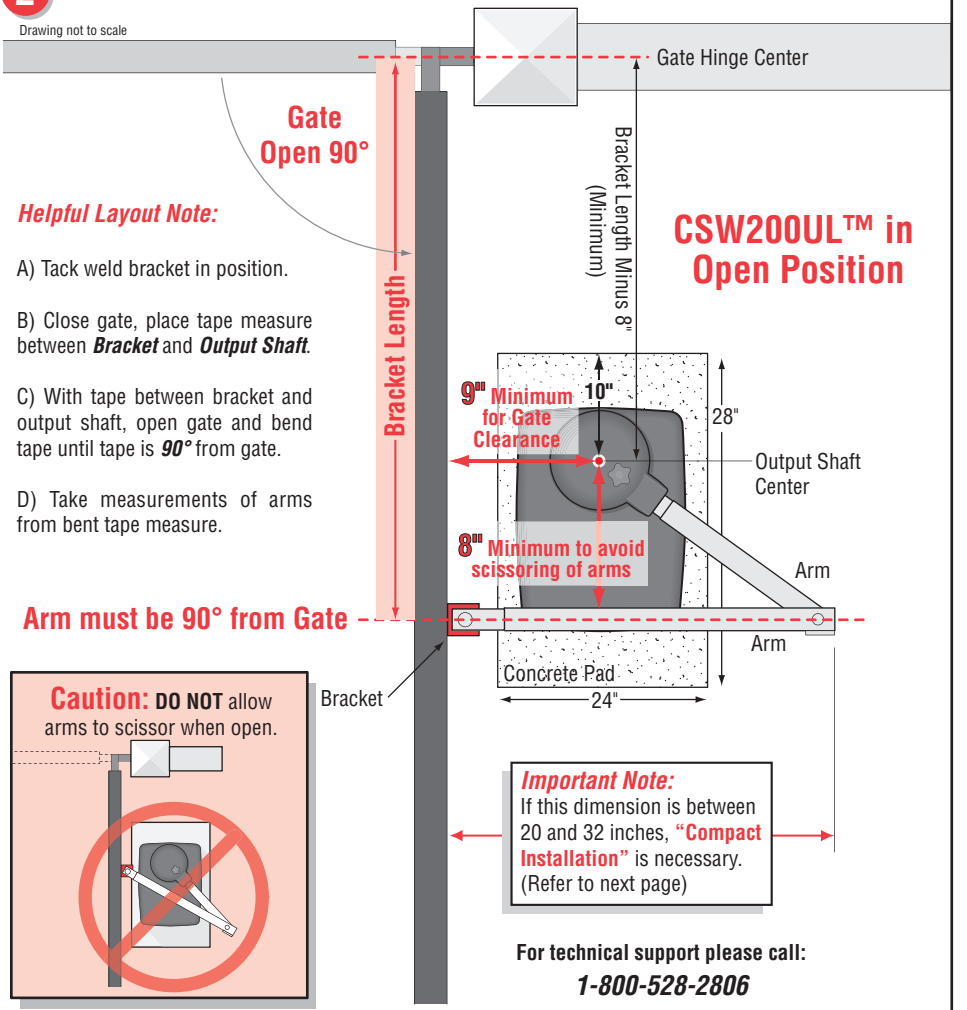
Top View of Closed Gate



Mount bracket ***at least*** a quarter of the gate length from the gate hinge.

2

Drawing not to scale



Helpful Layout Note:

A) Tack weld bracket in position.

B) Close gate, place tape measure between ***Bracket*** and ***Output Shaft***.

C) With tape between bracket and output shaft, open gate and bend tape until tape is ***90°*** from gate.

D) Take measurements of arms from bent tape measure.

Caution: DO NOT allow arms to scissor when open.

Important Note:
If this dimension is between 20 and 32 inches, **"Compact Installation"** is necessary. (Refer to next page)

For technical support please call:
1-800-528-2806

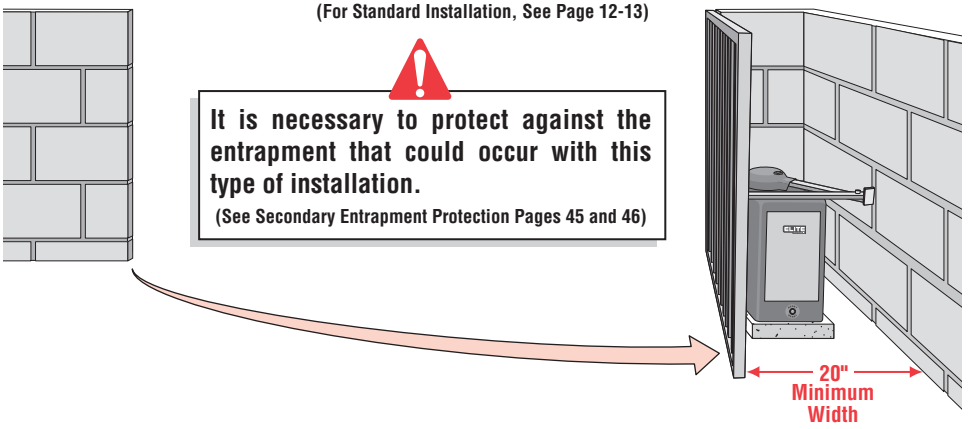
Compact Installation Only!

DO NOT **Use These Measurements for a Standard Installation.**

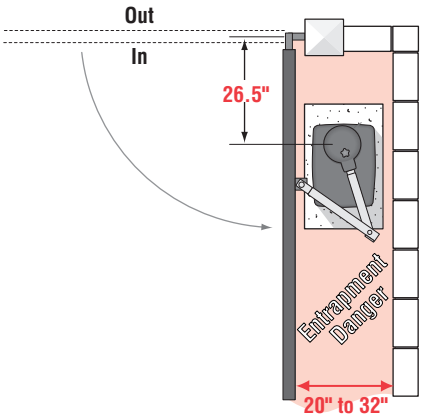
(For Standard Installation, See Page 12-13)

It is necessary to protect against the entrapment that could occur with this type of installation.

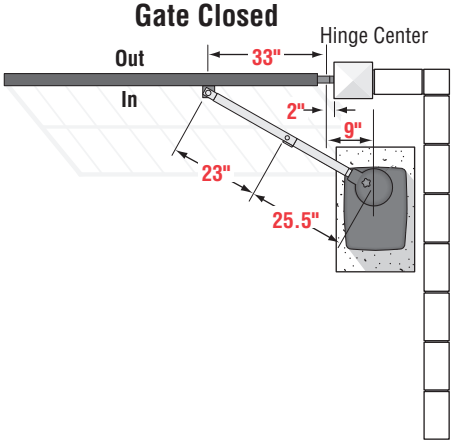
(See Secondary Entrapment Protection Pages 45 and 46)

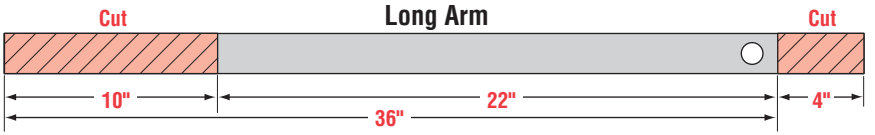


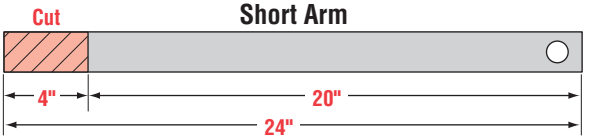
Gate Open



Gate Closed

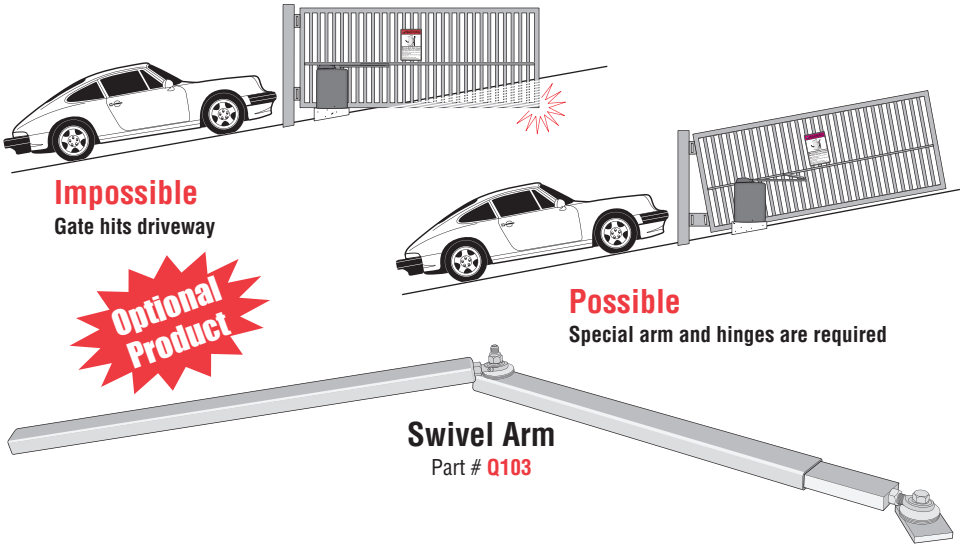






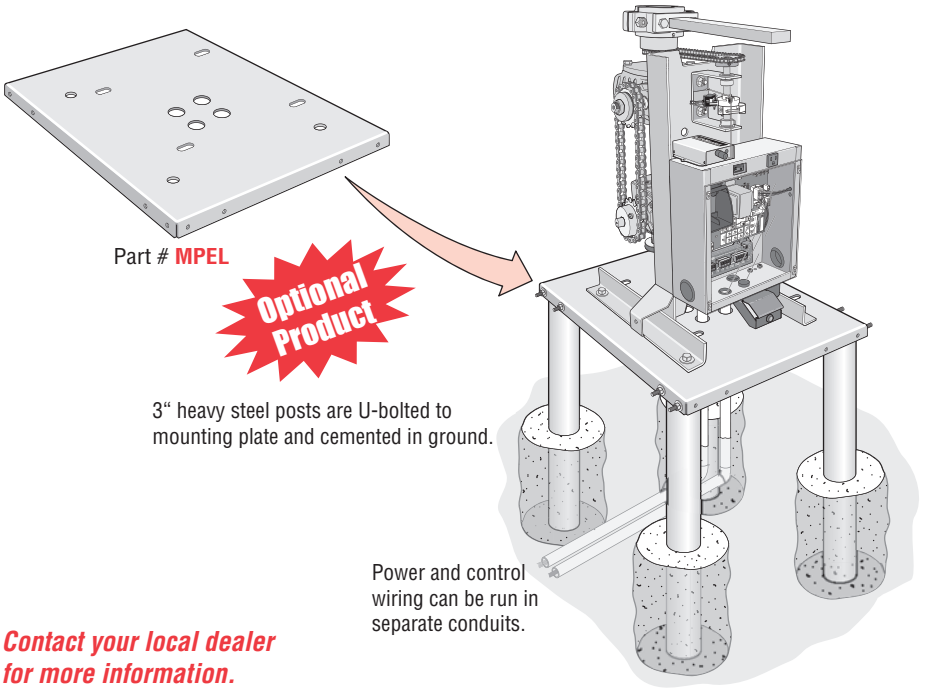
Follow the exact measurements, then cut the standard arm to meet the shorter measurements.

OPTIONAL UPHILL DRIVEWAY INSTALLATION



Optional Uphill Driveway Installation

OPTIONAL POST MOUNTING PLATE

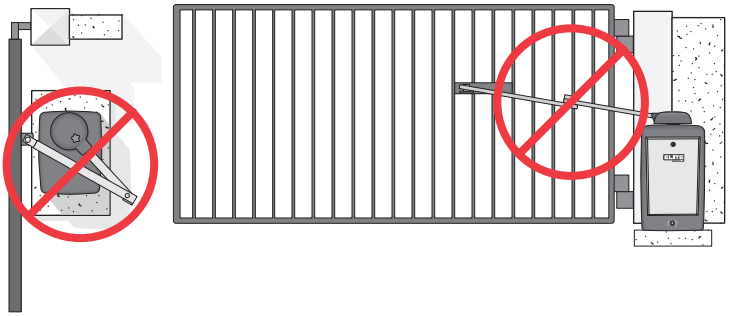

Part # MPEL
Optional Product
3“ heavy steel posts are U-bolted to mounting plate and cemented in ground.
Power and control wiring can be run in separate conduits.

Contact your local dealer for more information.

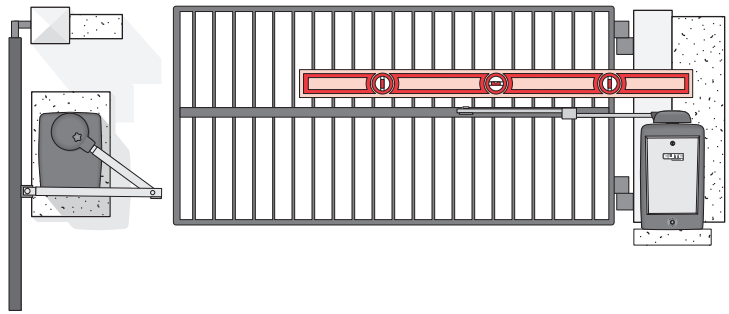
Optional Post Mounting Plate

ARM INSTALLATION

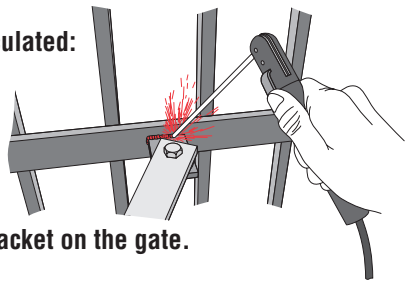
Incorrect Installation



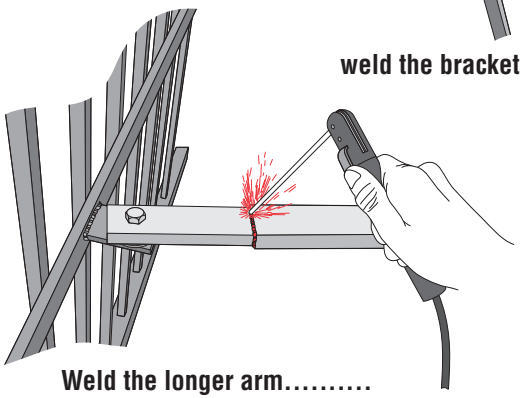
Correct Installation



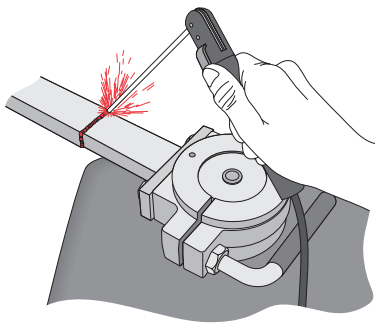
Once the gate arm measurements are calculated:



weld the bracket on the gate.



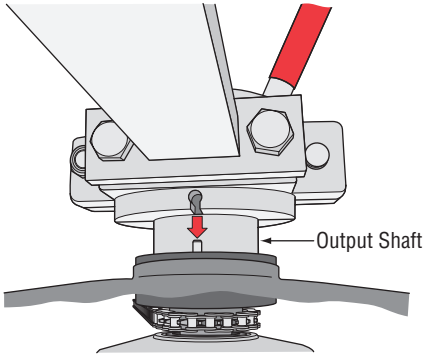
Weld the longer arm.....



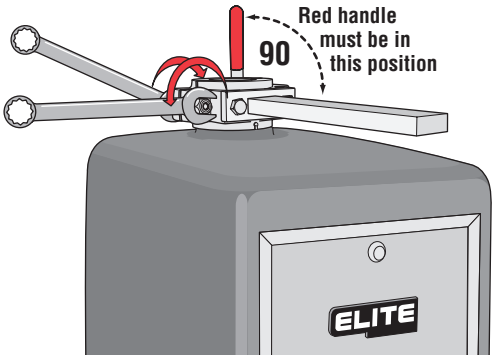
.....then weld the shorter arm.

Weld Completely Around the Rectangular Tubes

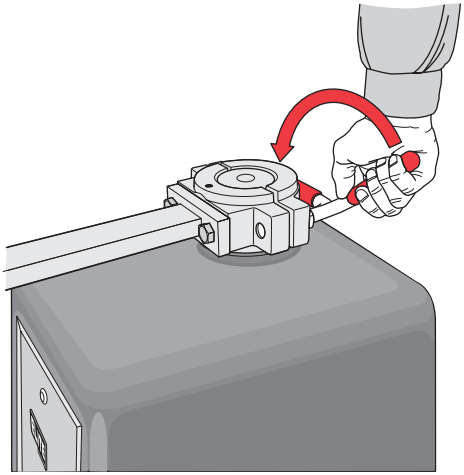
ADJUSTMENT OF OUTPUT SHAFT



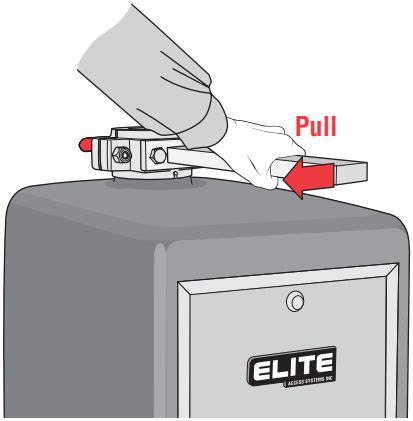
1 Fit Pin in Slot



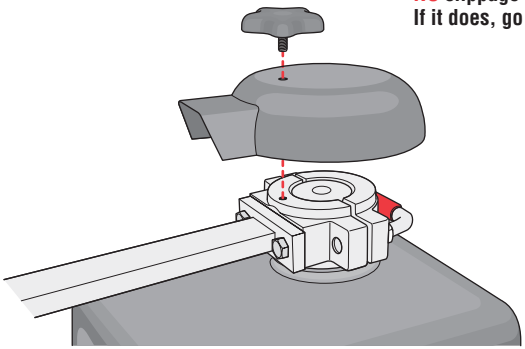
2 Tighten the Nut



3 Tighten Handle

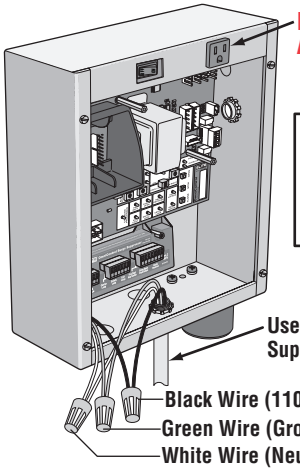


4 Pull the short arm away from the gate.
NO slippage should occur.
If it does, go back and tighten the nut.

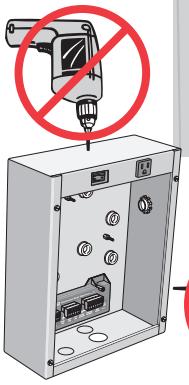


5 Replace Cover and Star Knob

HOW TO CONNECT POWER (110V)


Do Not Use This Outlet Unless You Are An Authorized Service Technician
Use U.L. Listed Conduit for Supplying Power to the Unit
Black Wire (110 Vac)
Green Wire (Ground)
White Wire (Neutral)

Suggestion:
Seal all open holes of electronic box with sealant when finished wiring.



Minimum: 20-amp breaker switch **per operator** needed.

Gate Operator MUST be Properly Grounded

Important: A factory installed heater must be wired into the power supply. See page 33.

Wire Gauge Requirement for 110 Vac Power Supply

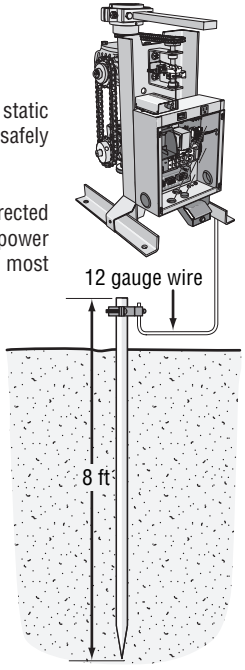
	16 Gauge	14 Gauge	12 Gauge	10 Gauge	8 Gauge	4 Gauge
1/2 HP and Dual Motor	**150 Feet**	**250 Feet**	**400 Feet**	**650 Feet**	**1000 Feet**	**2200 Feet**
1 HP	**75 Feet**	**125 Feet**	**200 Feet**	**325 Feet**	**500 Feet**	**1100 Feet**

Caution: Not responsible for conflicts between the information listed in the above chart and the requirements of your local building codes. The information is for suggested use only. Check your local codes before installation.

Earth Ground Rod Installation

Proper grounding gives an electrical charge, such as from an electrical static discharge or a near lightning strike, a path from which to dissipate its energy safely into the earth.

Without this path, the intense energy generated by lightning could be directed towards the Elite gate operator. Although nothing can absorb the tremendous power of a direct lightning strike, proper grounding can protect the gate operator in most cases.



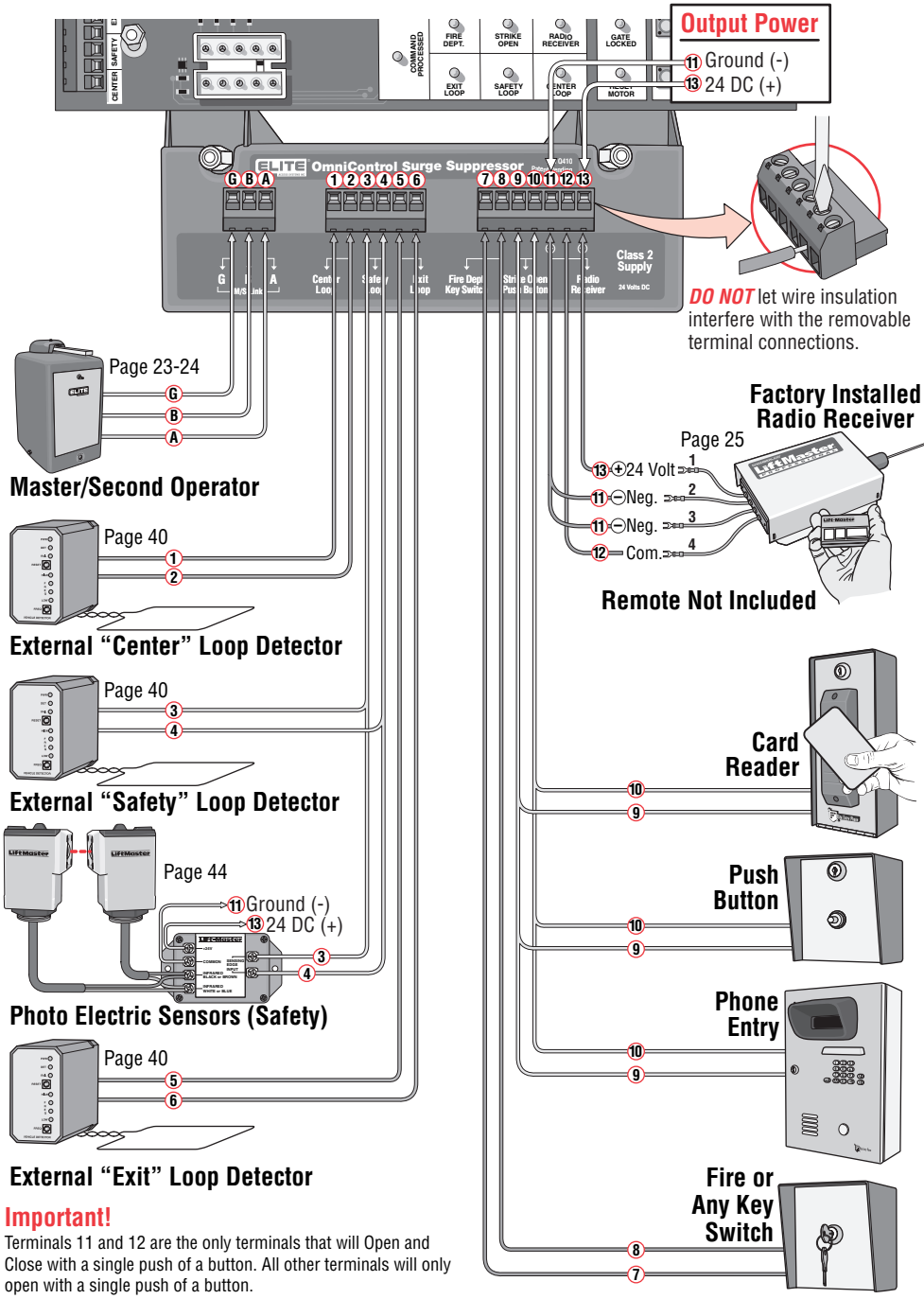
Before digging more than 18" deep, contact local underground utility locating companies.
Avoid damaging gas, power, or other underground utility lines.

The earth ground rod must be located within 3 feet from the gate operator. Use the proper type earth ground rod for your local area.

The ground wire ***must*** be a single, whole piece of wire. ***Never*** splice two wires for the ground wire. If you should cut the ground wire too short, break it, or destroy its integrity, replace it with a single wire length.

Not responsible for improper installation or failure to comply with all necessary local building codes.

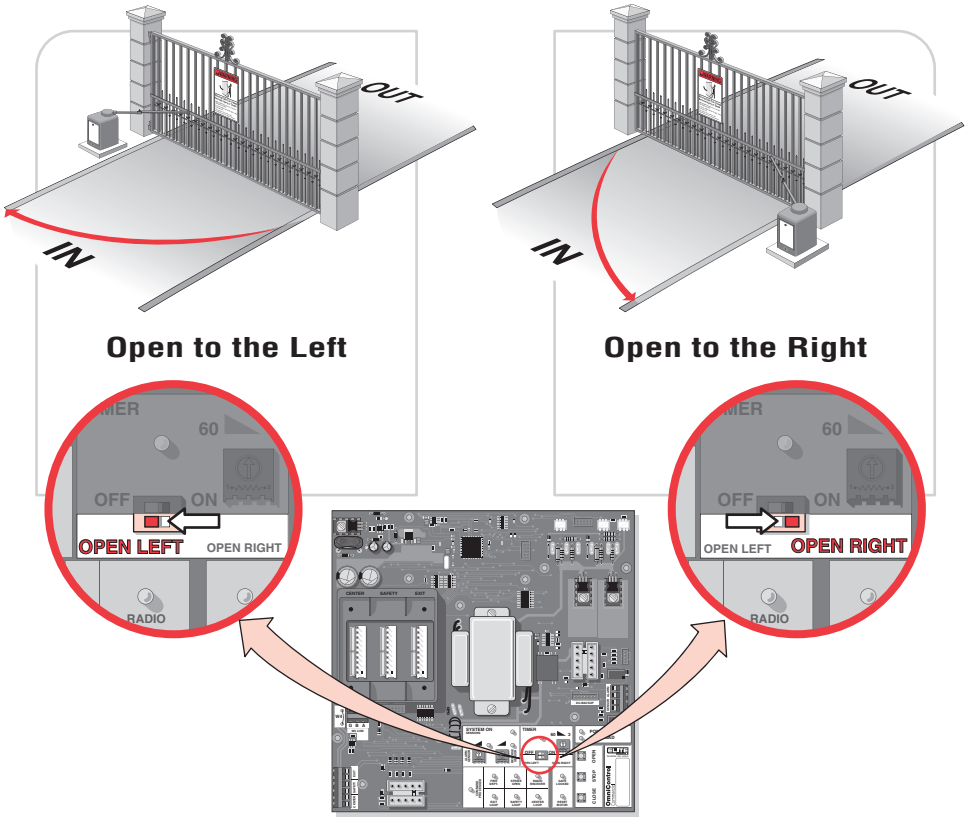
SURGE SUPPRESSOR TERMINAL INPUT CONNECTIONS



Important!

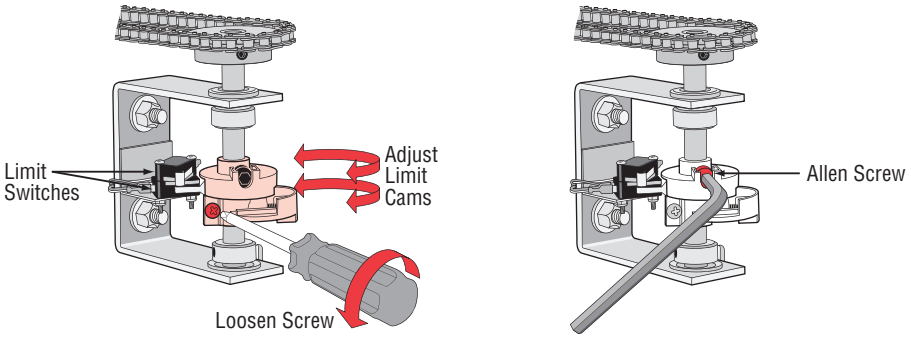
Terminals 11 and 12 are the only terminals that will Open and Close with a single push of a button. All other terminals will only open with a single push of a button.

CHOOSING GATE MOVEMENT DIRECTION

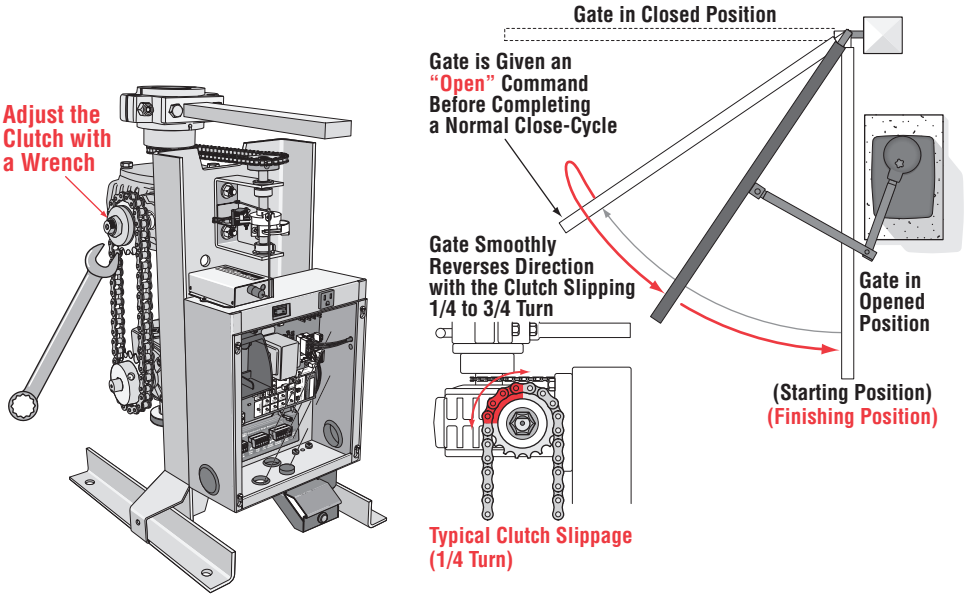


ADJUSTING GATE TRAVELING DISTANCE

Release the red handle and open the gate to a distance desired. Loosen the screw. Turn limit cam until the half moon shape hits the limit switch and you hear the switch ***click***. For closing cycle, do the same with the other limit cam. For a more precise adjustment, use the set allen screw.



CLUTCH ADJUSTMENT


Adjust the Clutch with a Wrench
Gate in Closed Position
Gate is Given an "Open" Command Before Completing a Normal Close-Cycle
Gate Smoothly Reverses Direction with the Clutch Slipping 1/4 to 3/4 Turn
Gate in Opened Position
(Starting Position)
(Finishing Position)
Typical Clutch Slippage (1/4 Turn)

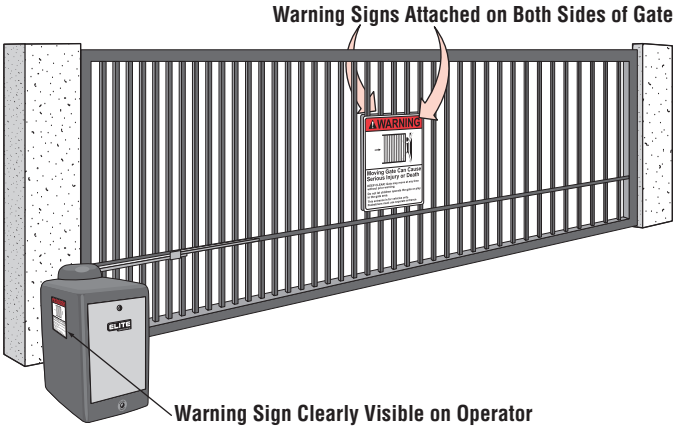
The adjustment is for a gate that is over 300 pounds and 12 feet long or longer. While the gate is closing, instantly an "open" command is given as shown above; the clutch may slip a bit, max. of 1/4 to 3/4 of a turn (slippage depends on the weight of the gate). If it does not slip, then readjust the clutch.

MOUNTING REQUIRED WARNING SIGNS

Installers are required to adhere to this procedure: The UL required Warning Signs must be installed in plain view and on ***both sides*** of each commercial gate installed. Each sign is made with fastening holes in each corner and should be permanently secured in a suitable manner. Also the warning sticker should be placed on the operator so it is clearly visible. Installers should keep photos of signs on gate in their records.

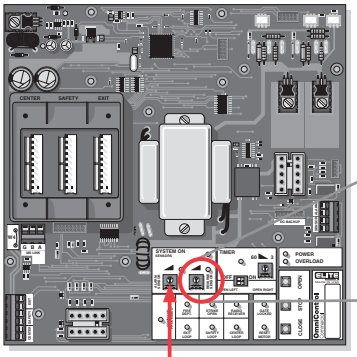
Elite Part # A WS

WARNING
Moving Gate Can Cause Serious Injury or Death
KEEP CLEAR! Gate may move at any time without prior warning.
Do not let children operate the gate or play in the gate area.
This entrance is for vehicles only. Pedestrians must use separate entrance.



2-WAY ADJUSTABLE REVERSING SENSOR

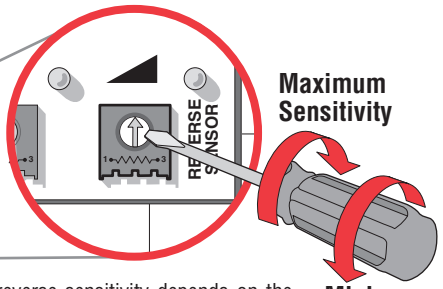
2-Way Adjustable Reversing Sensor



DO NOT **TOUCH ALARM SENSOR**

CAUTION: If the power supply to the gate operator is less than 99 volts, adjust the alarm by turning the alarm adjustment counter-clockwise enough to actuate the alarm when obstructed but not sensitive enough for false triggering to occur.

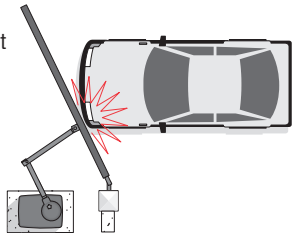
Adjusted by Qualified Service Personnel



The level of reverse sensitivity depends on the weight of the gate and the condition of installation. To make a better gate system, use any of Chamberlain Elite's power hinges.

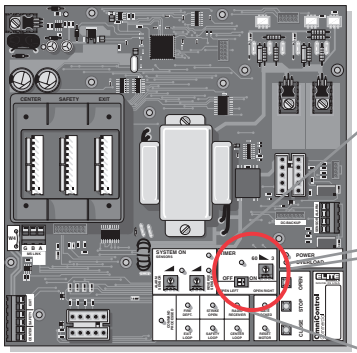
Too sensitive = if the gate stops or reverses by itself.

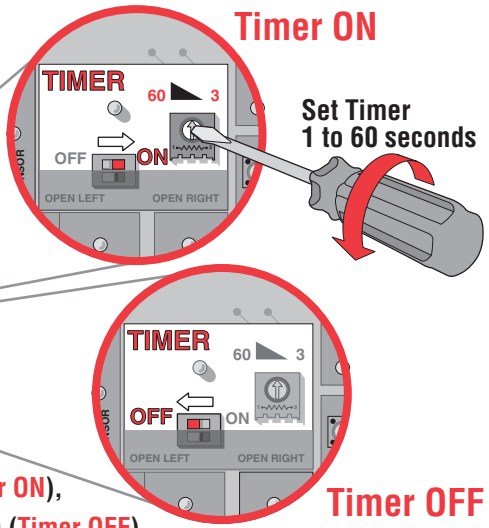
Not sensitive enough = if the gate hits a vehicle and does not stop or reverse.



ADJUSTABLE TIMER

Adjustable Timer

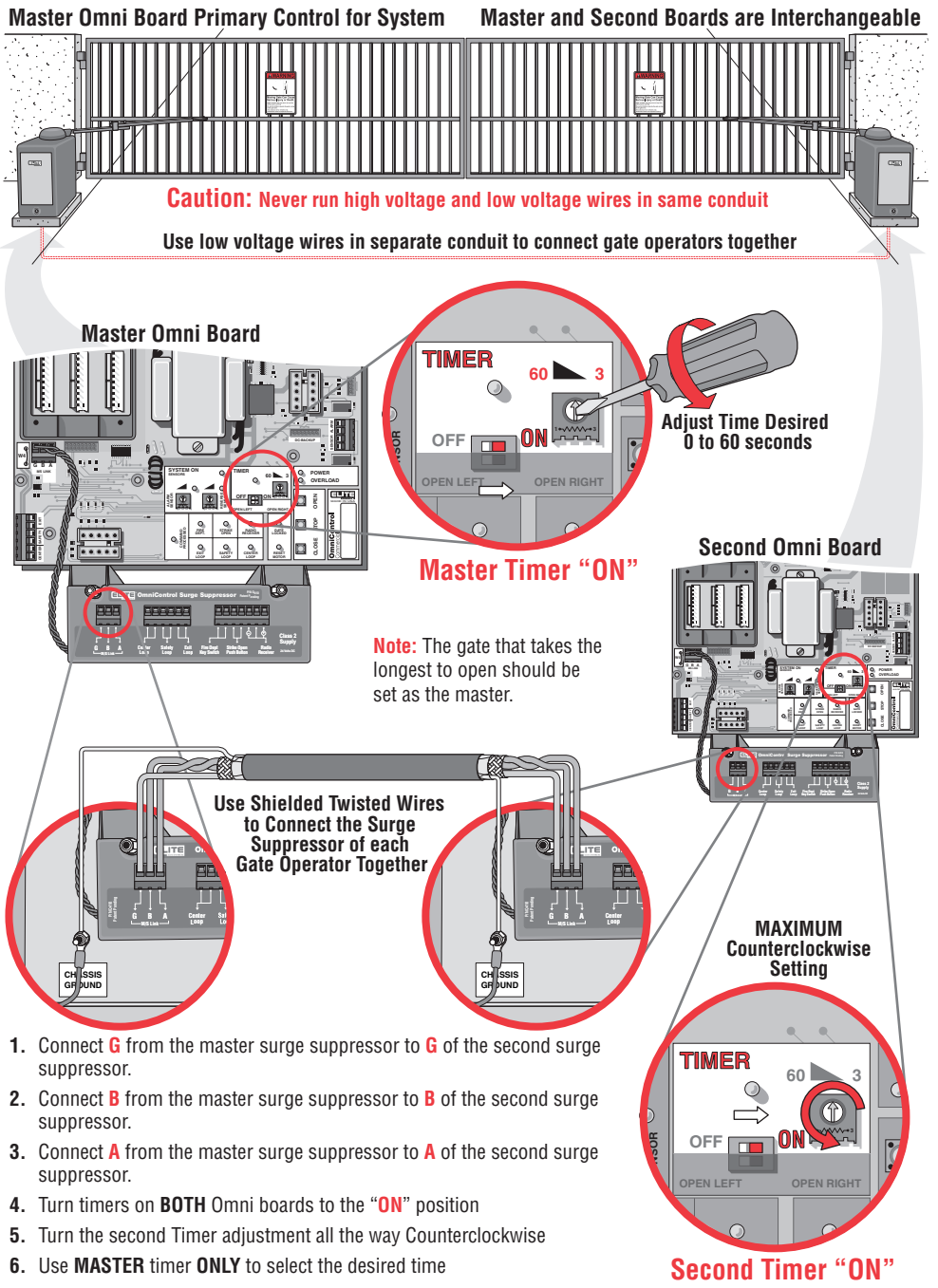




Timer can be set from 1 to 60 seconds (**Timer ON**),
OR for push open/push close type operation (**Timer OFF**).

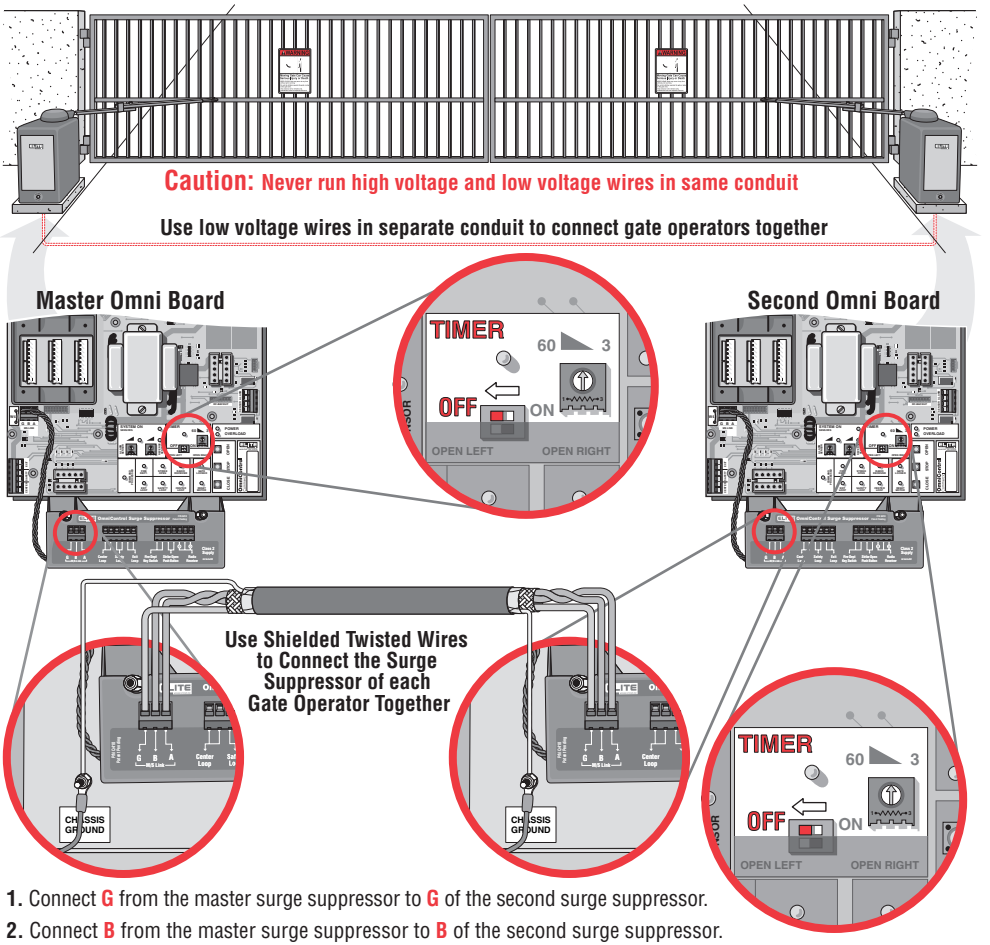
Note: When using master/second gates, the gate that takes the longest to open should be set as the master.

MASTER / SECOND WITH TIMER ON



1. Connect **G** from the master surge suppressor to **G** of the second surge suppressor.
2. Connect **B** from the master surge suppressor to **B** of the second surge suppressor.
3. Connect **A** from the master surge suppressor to **A** of the second surge suppressor.
4. Turn timers on **BOTH** Omni boards to the "**ON**" position
5. Turn the second Timer adjustment all the way Counterclockwise
6. Use **MASTER** timer **ONLY** to select the desired time

MASTER / SECOND WITH TIMER OFF


Caution: Never run high voltage and low voltage wires in same conduit
Use low voltage wires in separate conduit to connect gate operators together
Master Omni Board
Second Omni Board
TIMER
60
3
OFF
ON
OPEN LEFT
OPEN RIGHT
Use Shielded Twisted Wires to Connect the Surge Suppressor of each Gate Operator Together
CHASSIS GROUND

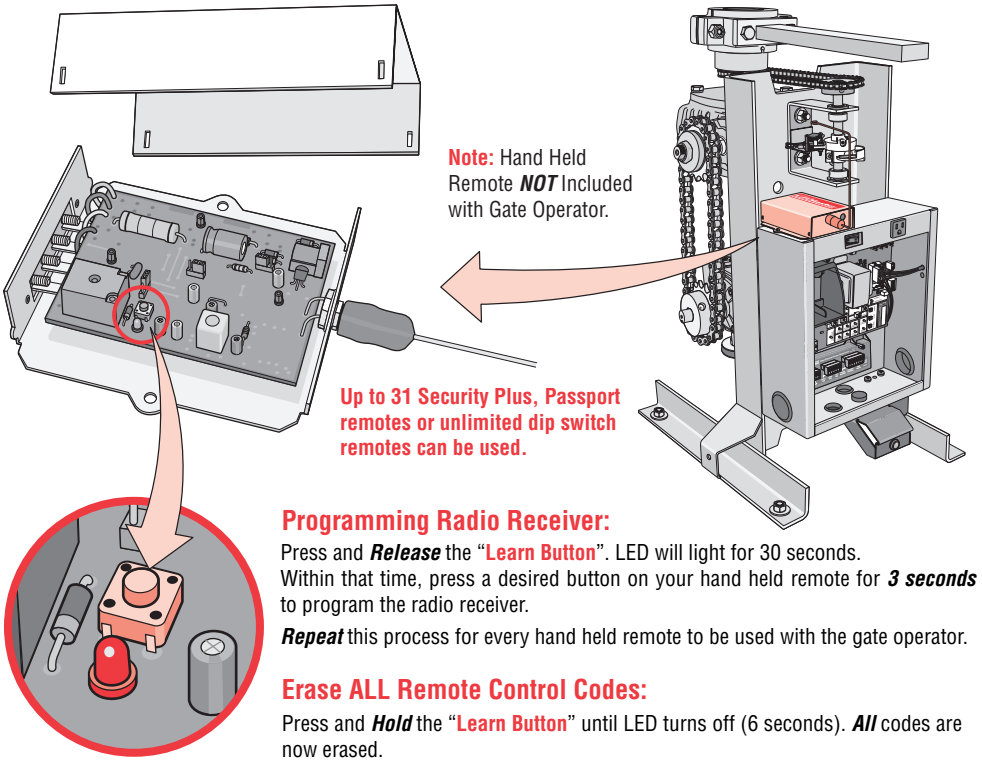
1. Connect **G** from the master surge suppressor to **G** of the second surge suppressor.
2. Connect **B** from the master surge suppressor to **B** of the second surge suppressor.
3. Connect **A** from the master surge suppressor to **A** of the second surge suppressor.
4. Turn timers on **BOTH** Omni boards to the "**OFF**" position

PARTIAL MASTER/INDIVIDUAL CONTROL

In order for the following operation to occur, follow the instructions.

Example: There is a double gate, the entry gate is to be opened with a radio transmitter and the exit gate with a free exit loop. Only one safety loop system is to open both gates, and a fire department switch should open both gates at the same time.

1. Connect the radio receiver to entry gate only.
2. Connect the exit loop to exit gate only.
3. Connect the safety loop to both entry and exit gates. (Observe polarity of voltage)
4. Connect the fire department switch to both entry and exit gates. (Observe polarity of both operators)



Note: Hand Held Remote ***NOT*** Included with Gate Operator.

Up to 31 Security Plus, Passport remotes or unlimited dip switch remotes can be used.

Programming Radio Receiver:

Press and ***Release*** the "**Learn Button**". LED will light for 30 seconds. Within that time, press a desired button on your hand held remote for ***3 seconds*** to program the radio receiver.

Repeat this process for every hand held remote to be used with the gate operator.

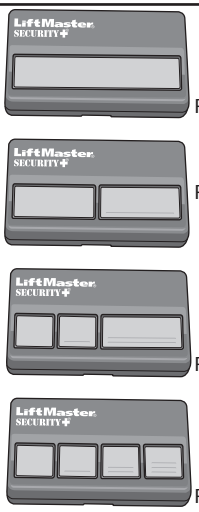
Erase ALL Remote Control Codes:

Press and ***Hold*** the "**Learn Button**" until LED turns off (6 seconds). ***All*** codes are now erased.

Optional Hand Held Remotes

LiftMaster SECURITY+

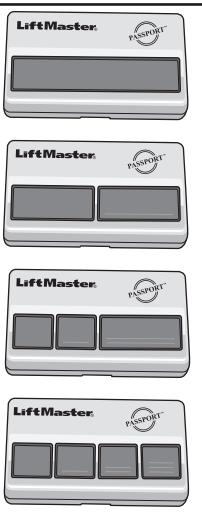
Mini 3 Button
Part # **970LM**



Part # **971LM**
Part # **972LM**
Part # **973LM**
Part # **974LM**

Optional Products

LiftMaster PASSPORT™



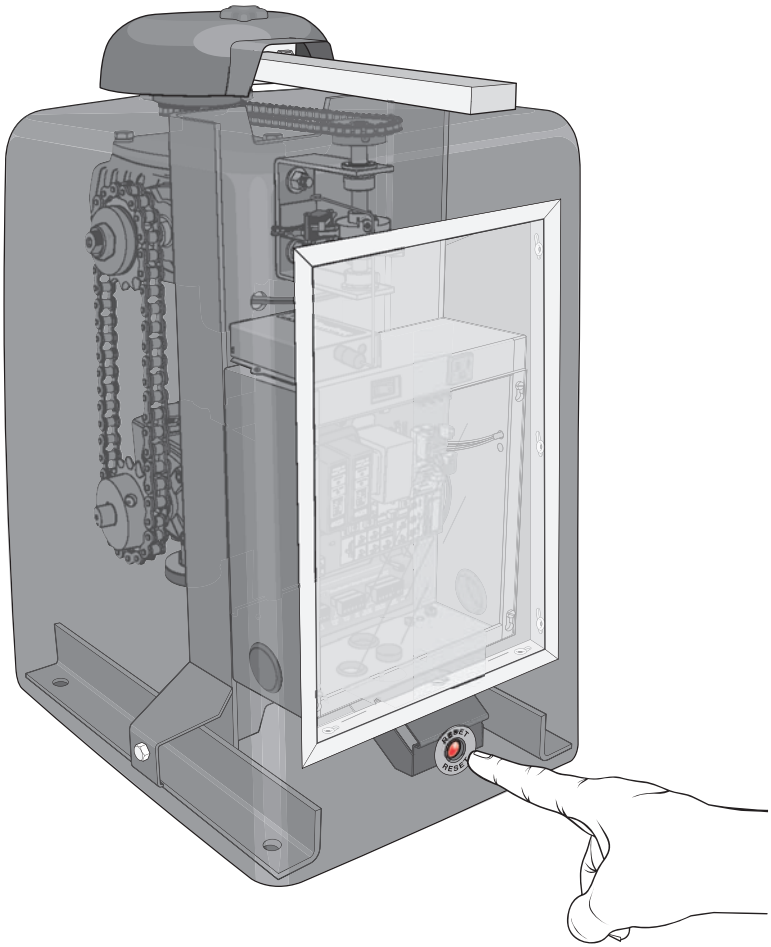
Part # **CPT1**
Part # **CPT2**
Part # **CPT3**
Part # **CPT4**

Mini 3 Button
Part # **CPTK3**

Mini 3 Button with HID Prox. Sensor
Part # **CPTK3PH**

BUILT-IN RESET BUTTON

Built-In Reset Button



When the gate operator's audio alarm (See next page) has been tripped, the ***Reset Button*** must be pushed for the operator to function again.

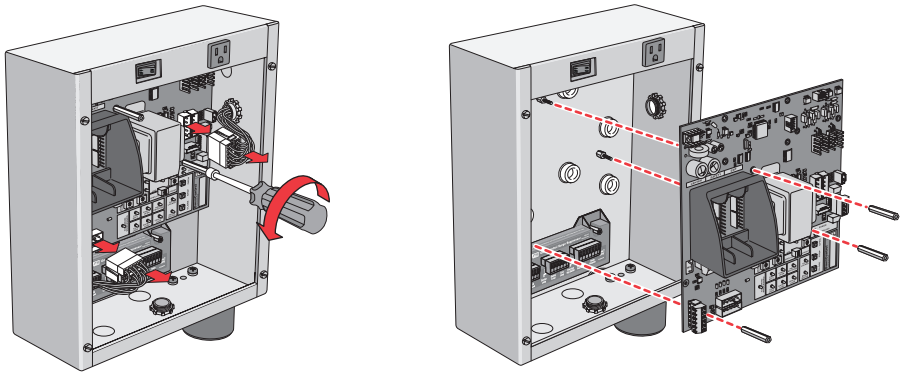
The ***Reset Button*** will shut off an activated audio alarm and reset the operator to function again.

If the audio alarm goes off, always check the gate area for:

- ***Obstructions in the gate path.***
- ***Damage to the gate and/or gate operator.***

Pressing the ***Reset Button*** will ***stop*** a moving gate during a normal open/close cycle, like a stop button. The operator does ***NOT*** need to be reset after doing this.

REMOVE CONTROL BOARD



Disconnect wire harnesses from OmniControl board. Unscrew 3 nuts and remove board.

AUDIO ALARM

When one of the following events happens ***Twice Consecutively,***
the Alarm will Sound for 5 minutes!

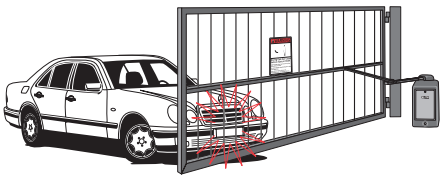
Press the Built-In Reset Button to Shut Off Alarm and Reset Operator! *(See previous page)*

① **The gate is too heavy or the arm is installed wrong** *(Refer to page 13 and 16).*

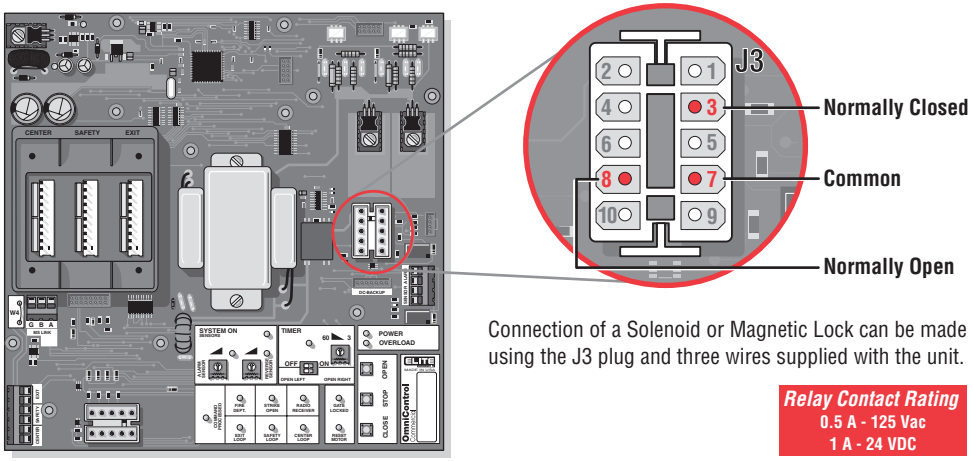
② **A foreign object is on the gate frame while the gate is moving.**

③ **Gate hinges are too tight or broken and the gate is not moving freely.**

④ **The gate hits the driveway, curb or other, and gets stuck or bent in an awkward position.**



⑤ **The gate is moving and a vehicle pushes the gate.**

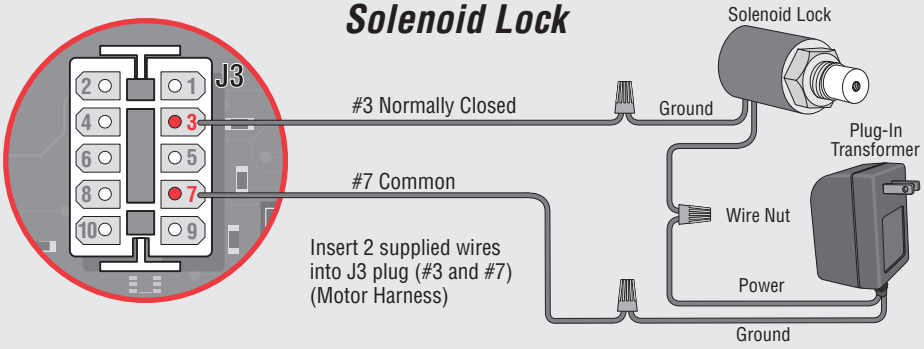


Connection of a Solenoid or Magnetic Lock can be made using the J3 plug and three wires supplied with the unit.

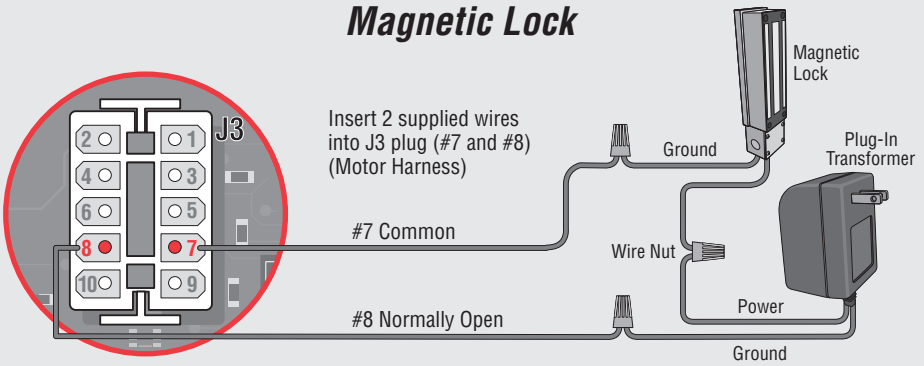
Relay Contact Rating
0.5 A - 125 Vac
1 A - 24 VDC

Important: An Optional Modular Relay Adapter may be needed for 2 Amp - 125 AC/DC switching load capability. See page 38.

Solenoid Lock



Magnetic Lock

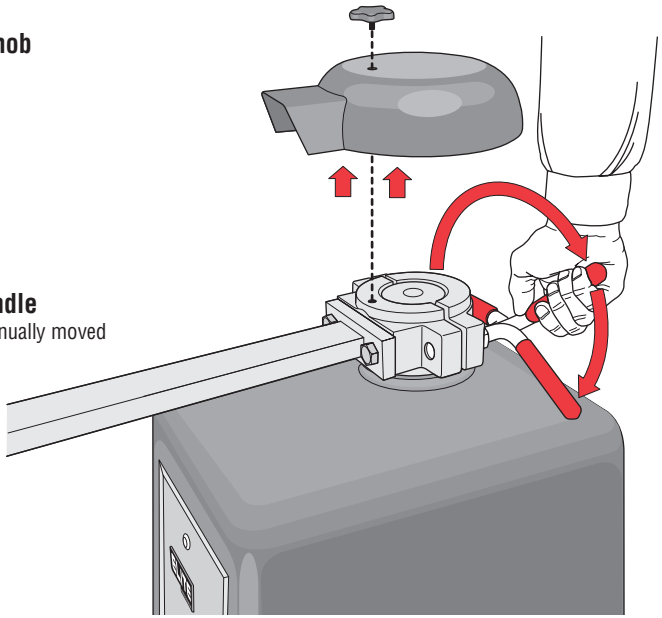


EMERGENCY RELEASE

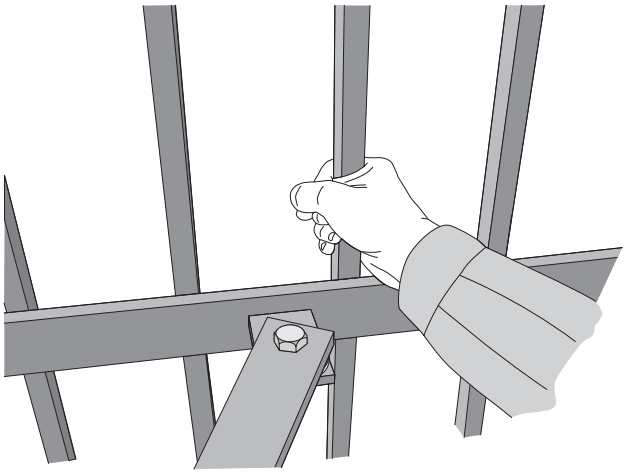
① **Unscrew Star Knob**

② **Lift Off Cover**

③ **Loosen Red Handle**
Gate can now be manually moved



Grab the Gate to Make Adjustments

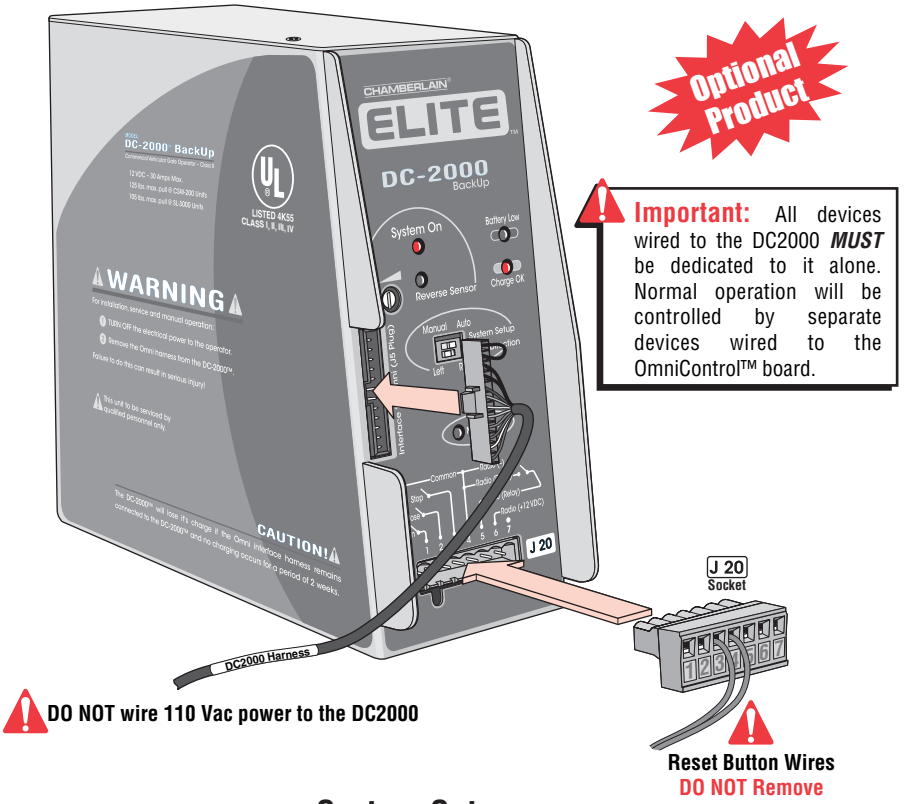


Tighten the Red Handle, Replace the Cover and Bolt when Finished

When the power is turned on again, the gate will readjust itself automatically.

1. Plug in the 12 pin plug into the DC2000 control unit. Make sure the **"System ON"** and **"Charge OK"** LEDs are lit. If the **"Battery Low"** led comes on, the battery needs to charge before it can be used.

2. Make sure **"Gate Direction"** setting on DC2000 is set the same as the gate operator's setting.



System Setup

"Manual" setting: The DC2000 will respond to the input devices wired to the J 20 socket.
This mode can also be used as an emergency override. If 110 Vac power is on, but the system has an electronic malfunction, the gate can be operated using the DC2000 system with input devices wired to J 20 socket.

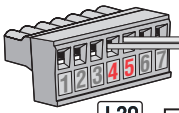
"Auto" setting: The DC2000 opens the gate automatically upon 110 Vac power failure and stays open. When 110 Vac power is restored, the gate operator will return to normal operation. (The gate can be closed by manual command)

	110 Vac Power Failure	110 Vac Power On, OmniControl™ Board Malfunction	110 Vac Power On, Emergency Override
Manual Mode	Push and **Hold** to operate gate	Turn the 110 Vac power off then push and **Hold** to operate gate	Push and **Hold** to override the OmniControl™ board
Auto Mode	Gate automatically opens	Turn the 110 Vac power off then gate opens automatically	Push and **Hold** to override the OmniControl™ board

Important: **All** devices wired to the DC2000 **MUST** be dedicated to it alone. Normal operation will be controlled by **separate** devices wired to the OmniControl™ board.

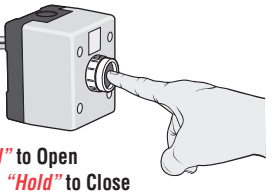
If the DC2000 is automatically opening the gate due to a power failure, any manual command such as **"One-Button", "Three Push Button", "Key Switch", "Photo Beam"** or **"Edge Sensor"** will cancel the automatic mode of the DC2000. After such cancellation, the DC2000 will continue to operate in manual mode until 110 Vac power is restored.

Manual One-Button



DO Not Remove the 2 Factory Installed Wires in the J 20 Socket

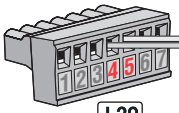
Optional Products

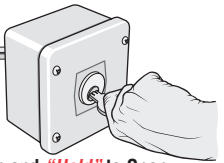


Part # **AEXITP**

Push and *"Hold"* to Open
Push again and *"Hold"* to Close

Key Switch





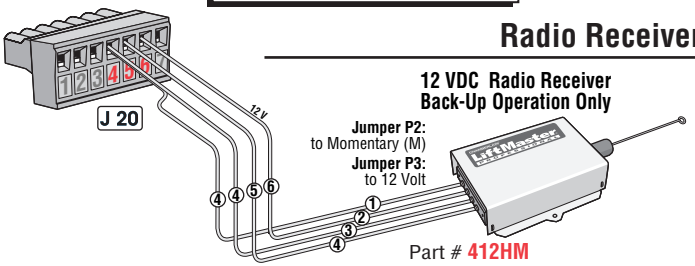
Part # **A1KX**

Turn and *"Hold"* to Open
Turn again and *"Hold"* to Close

EMERGENCY OVERRIDE

If 110 Vac power is on, but the system has an electronic malfunction, the gate can be operated using the DC2000 system with ***ANY*** of these devices shown.

Radio Receivers

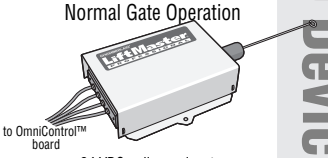


12 VDC Radio Receiver Back-Up Operation Only

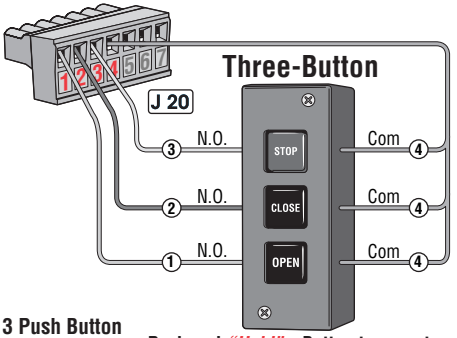
Jumper P2: to Momentary (M)
Jumper P3: to 12 Volt

Part # **412HM**

Normal Gate Operation

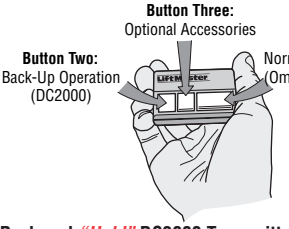


24 VDC radio receiver to be used by OmniControl™ Board ONLY!

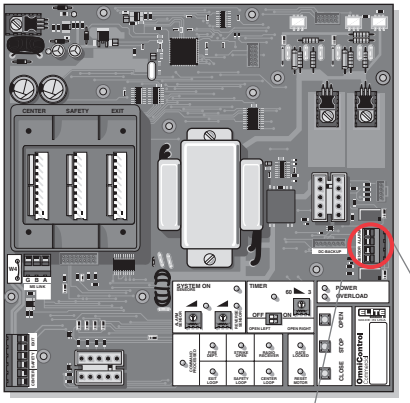


3 Push Button
Part # **02-103**

Push and *"Hold"* a Button to operate

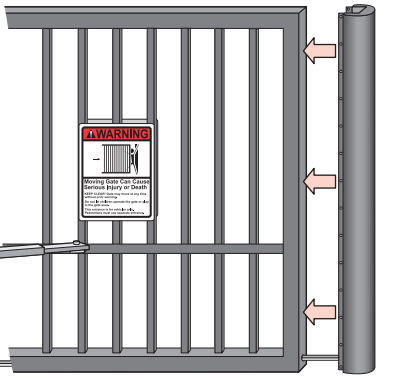


Push and *"Hold"* DC2000 Transmitter Button to Open
Push again and *"Hold"* DC2000 Transmitter Button to Close

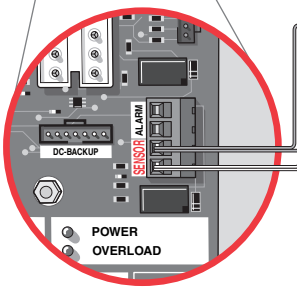


Edge Sensor

UL Listed 3 Sided Sensor



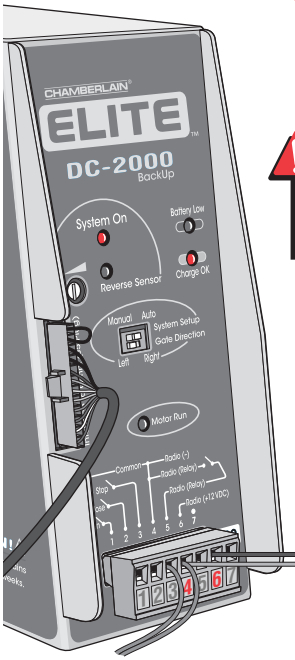
Part #s **G65MGO20**
G65MGR20
G65MGS20



OmniControl™ Board Sensor Connection

Important: ***DO NOT*** remove any existing attached wires from the Sensor/Alarm connector.

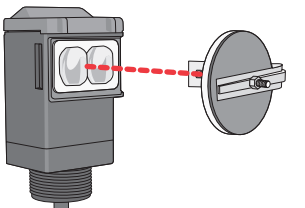
Optional Products



DO Not Remove the 2 Factory Installed Wires in the J 20 Socket

Photo Beam Sensor 12 VDC

Part # **AOMRON12V**



Power +12 VDC

Power Ground

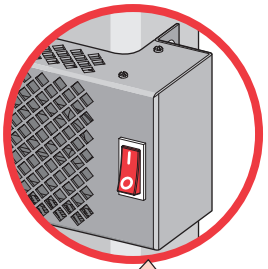
Contact your local dealer for more information.

USE ONLY 12 VDC FAILSAFE PHOTO BEAM SENSORS FOR THIS SAFETY OPTION

Failsafe Photo Beam: If a photo beam is not working, loses power or photo beam is blocked, then the photo beam will stop **all** gate operation.

OPTIONAL FACTORY INSTALLED HEATER

Connect the black, white and ground wire from the heater to the 110 Vac power supply as shown. When the heater switch is left in the "**ON**" position, the heater will turn on and off automatically when needed.

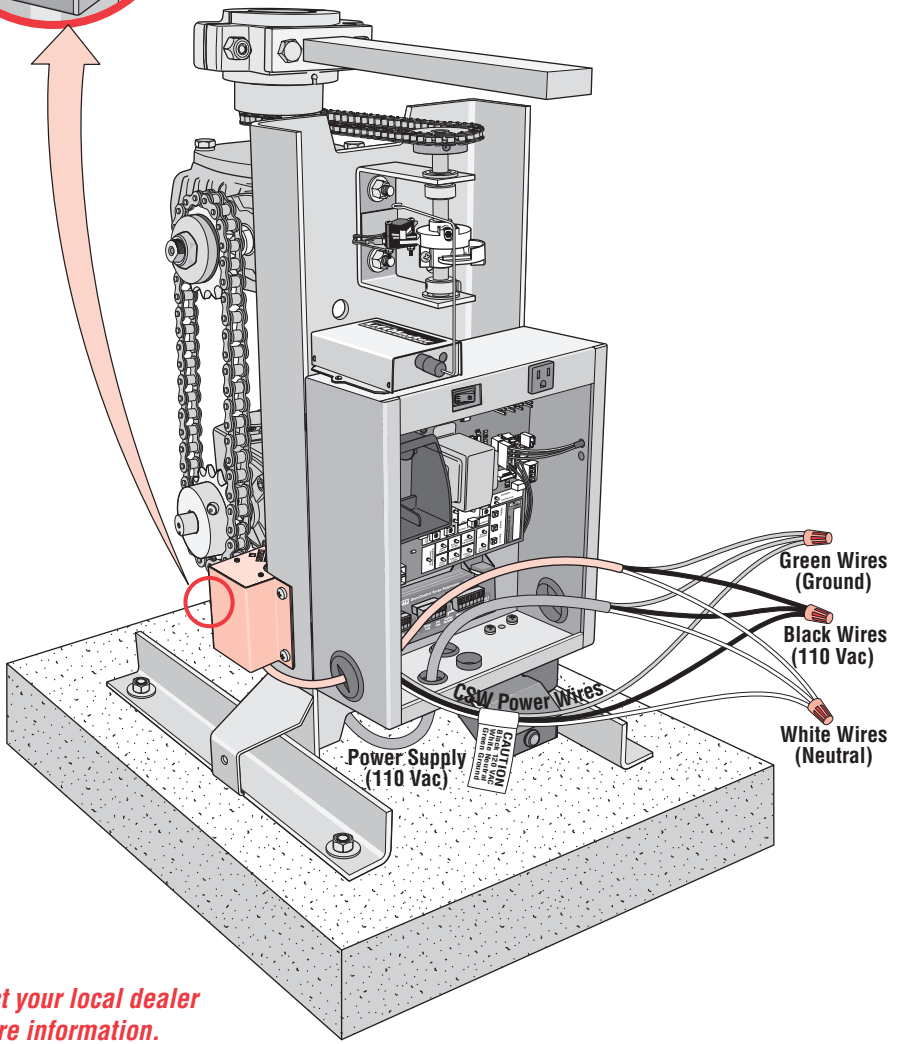


Switch should remain in the "**ON**" position.

Optional Product

DON'T TOUCH

Heater may be HOT when the switch is "ON"!

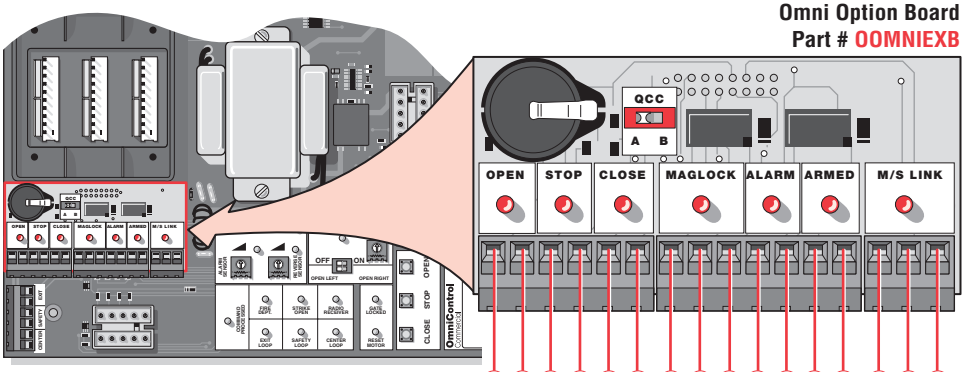


Contact your local dealer for more information.

OPTIONAL OMNI OPTION BOARD DESCRIPTION

Optional Omni Option Board Description

Omni Option Board
Part # OOMNIEXB



Optional Product

1 & 2 – Open Command

3 & 4 – Stop Command

5 & 6 – Close Command

7 – Common
8 – Normally Closed
9 – Normally Open
Solenoid
Maglock

10 & 11 – Burglar Alarm Output

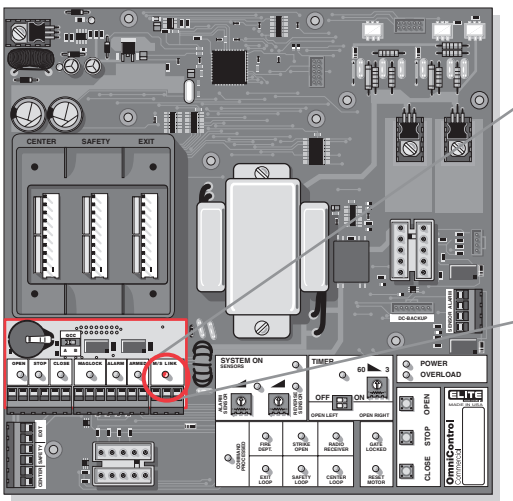
12 & 13 – Burglar Alarm Input

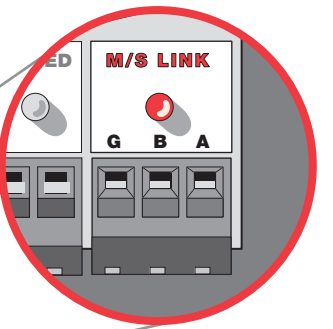
14 – Ground
15 – B
16 – A
Master/ Second or RS485

OPTIONAL MASTER / SECOND WITH OMNI OPTION BOARD

Optional Master / Second with Omni Option Board

Omni Option Board
Part # OOMNIEXB

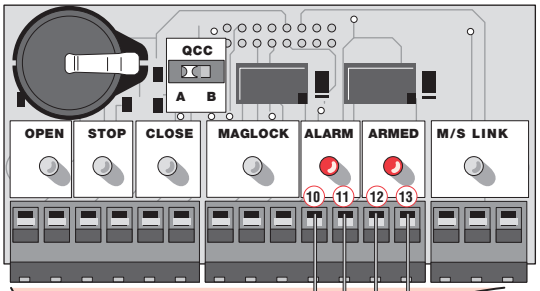




Optional Product

Use this socket (M/S LINK) if the Omni Option Board is being used, and Master/Second option is needed.

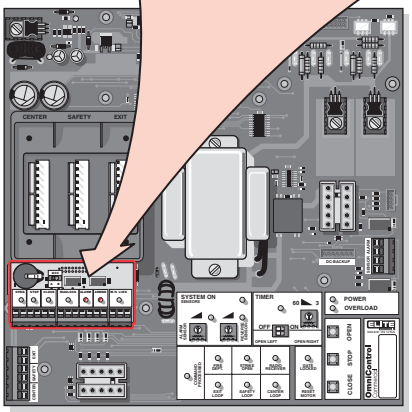
OPTIONAL HOUSE ALARM/PROXIMITY SWITCH WITH OMNI OPTION BOARD

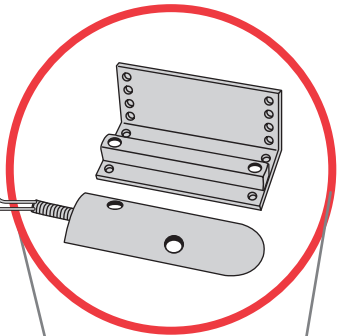


Alarm
10 – Common
11 – Normally Open

Armed
12 – Normally Closed
13 – Ground

Omni Option Board
Part # OOMNIEXB

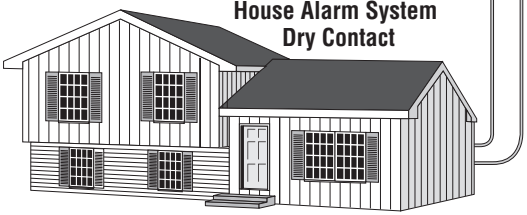




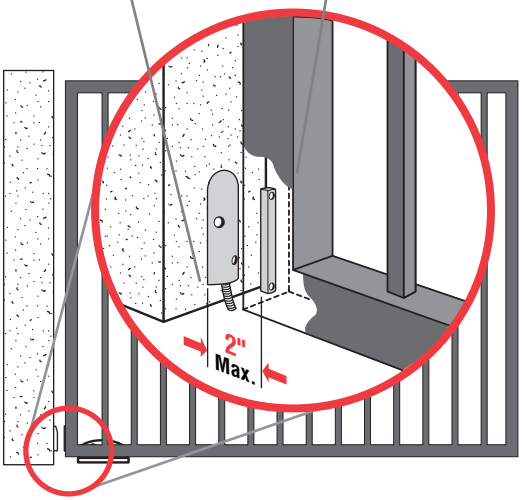
Proximity Switch
Part # APRS

Optional Products

Use Low Voltage Wire 20 AWG



12VDC
House Alarm System
Dry Contact

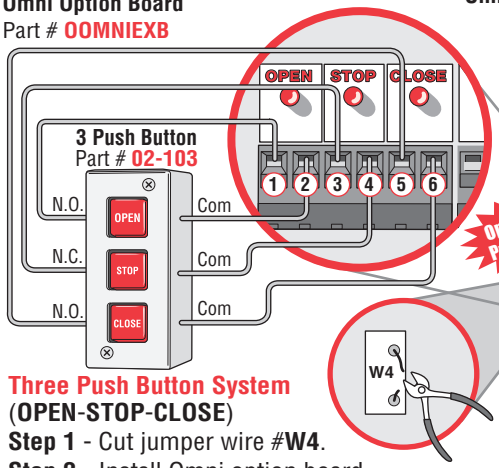


Optional House Alarm /Proximity Switch with Omni Option Board

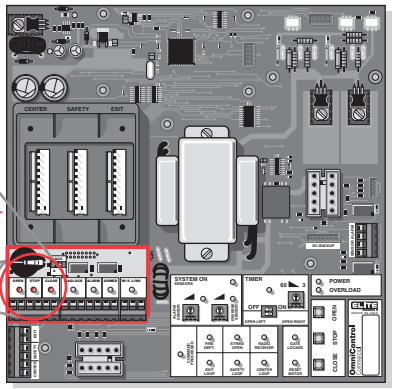
OPTIONAL THREE PUSH BUTTON STATION

Optional Three Push Button Station

Omni Option Board
Part # **OOMNIEXB**



Omni Option Board Needed to Preform This Function



Three Push Button System
(OPEN-STOP-CLOSE)

Step 1 - Cut jumper wire #**W4**.
Step 2 - Install Omni option board.
Step 3 - Connect **OPEN** push button to ①&②.
Step 4 - Connect **STOP** push button to ③&④.
Step 5 - Connect **CLOSE** push button to ⑤&⑥.

Note: If using the Master/Second board configuration, unplug the Master/Second link plug on main board and connect it into the Omni option board M/S link socket.

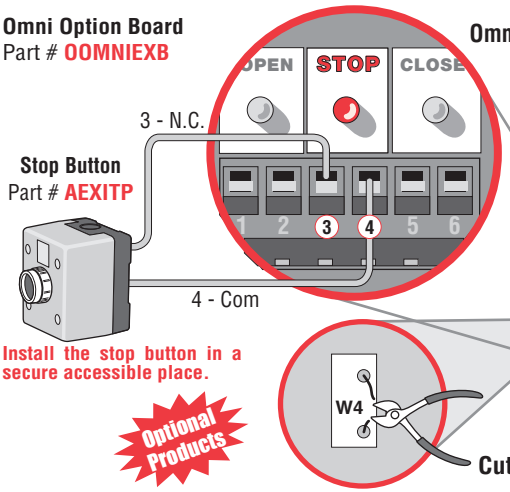
Caution: Make sure each push button is dry contact and there are no jumper wires between them.

Important! The Stop button must be "Normally Closed". 2, 4 and 6 are common on Omni Option Board for a 4 wire installation.

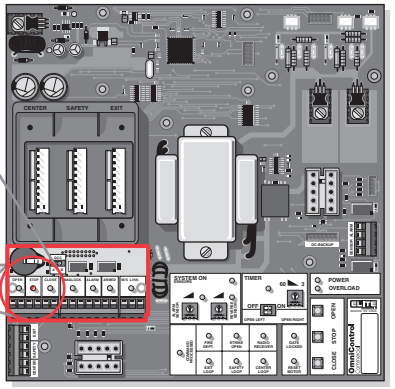
OPTIONAL STOP BUTTON ALARM SHUT-OFF

Optional Stop Button Alarm Shut-Off

Omni Option Board
Part # **OOMNIEXB**



Omni Option Board Needed to perform this function.



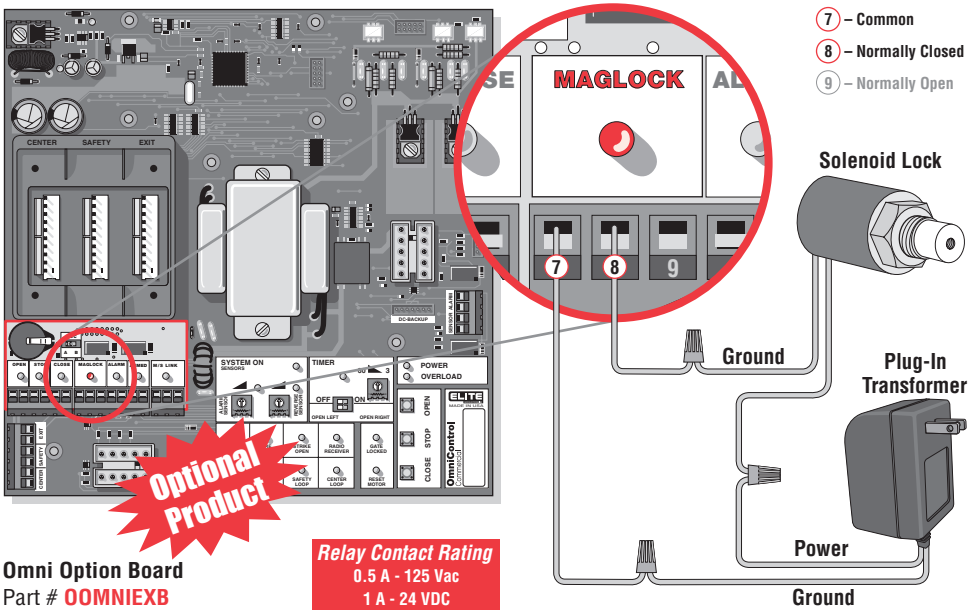
Cut jumper wire #W4.

Use the *Optional* STOP Button:

- To stop the movement of the gate in case of potential entrapment.
- To stop the audio alarm, (check for obstructions).
- To reset the operator after the alarm has triggered.

The "Optional" Stop Button will stop the audio alarm in case it has been triggered.

OPTIONAL SOLENOID CONNECTION WITH OMNI OPTION BOARD

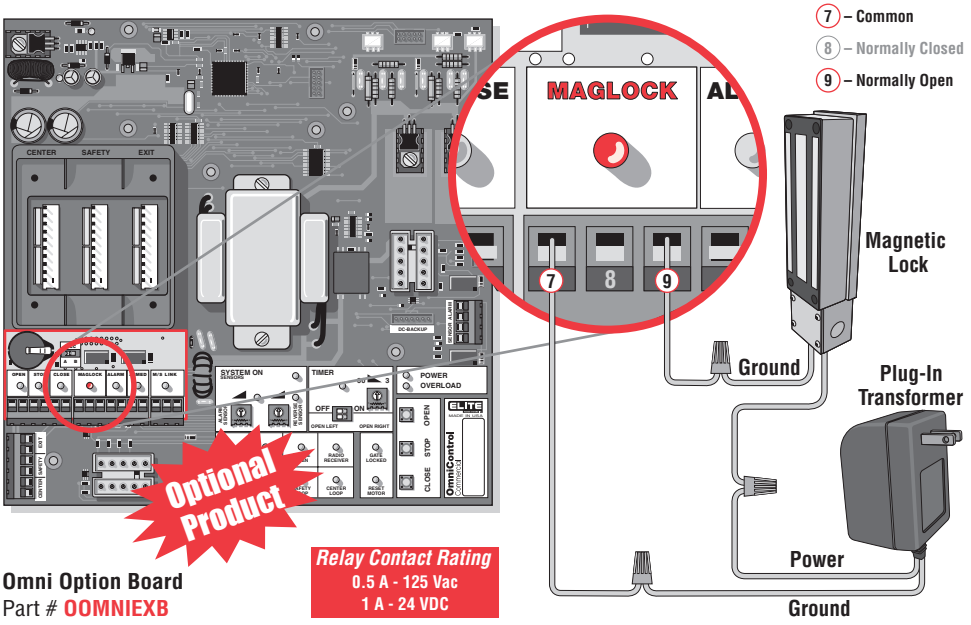


Omni Option Board
Part # **OOMNIEXB**

Relay Contact Rating
0.5 A - 125 Vac
1 A - 24 VDC

Optional Solenoid Connection with Omni Option Board

OPTIONAL MAGLOCK CONNECTION WITH OMNI OPTION BOARD

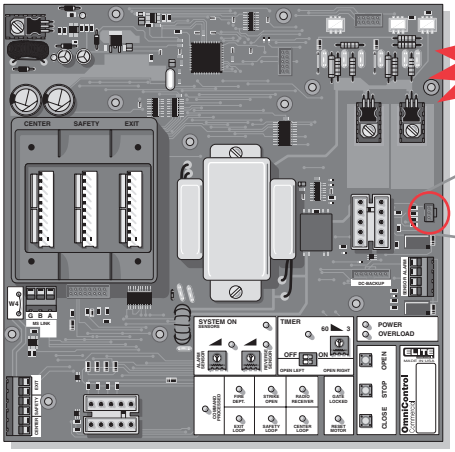


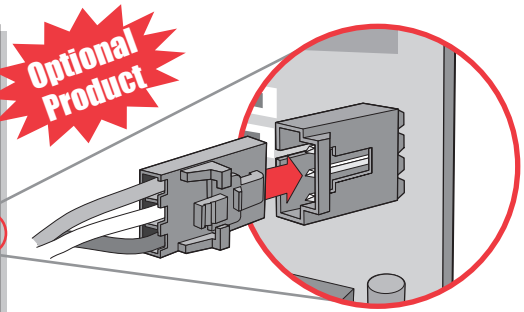
Omni Option Board
Part # **OOMNIEXB**

Relay Contact Rating
0.5 A - 125 Vac
1 A - 24 VDC

Optional Maglock Connection with Omni Option Board

Optional Relay Adapter Connection

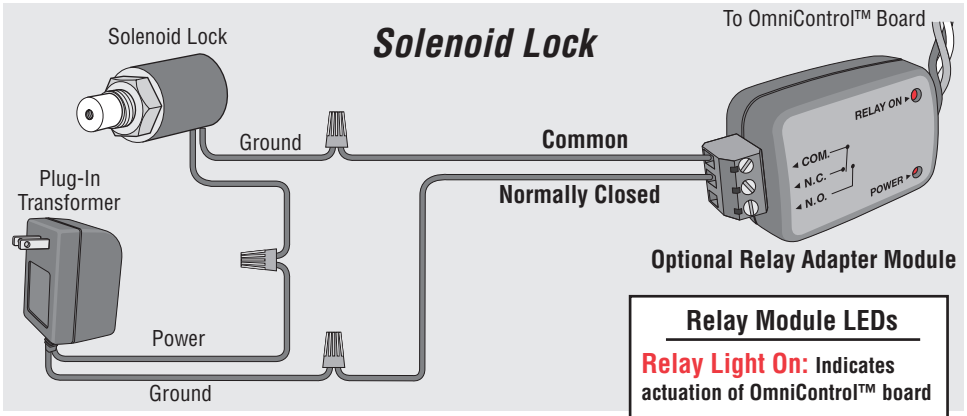




Connection of a Solenoid or Magnetic Lock can be made using the "Optional" Relay Adapter Module.

Relay Contact Rating
2 Amp - 125 AC/DC
2 Amp switching load capability

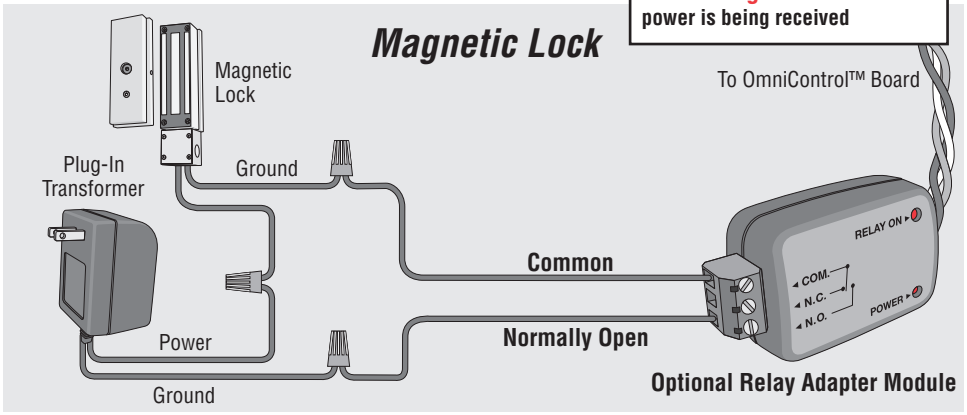
Part # **Q400MAU**

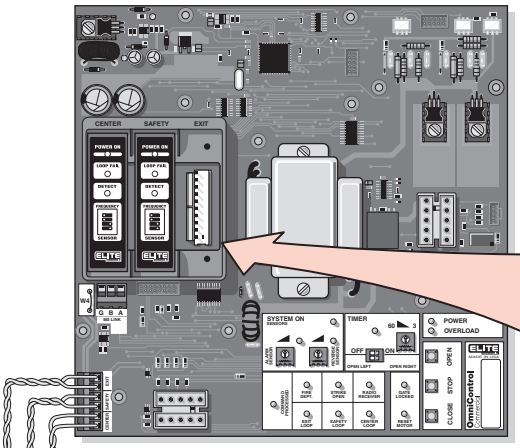


Relay Module LEDs

Relay Light On: **Indicates actuation of OmniControl™ board**

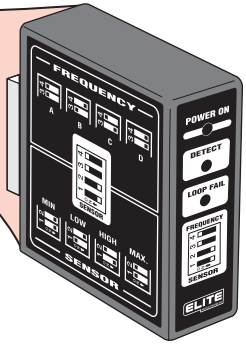
Power Light On: **Indicates power is being received**





Optional Product

Caution:
Use different frequencies for every single loop detector. Turn off gate operator (from switch on electrical box) during installation.



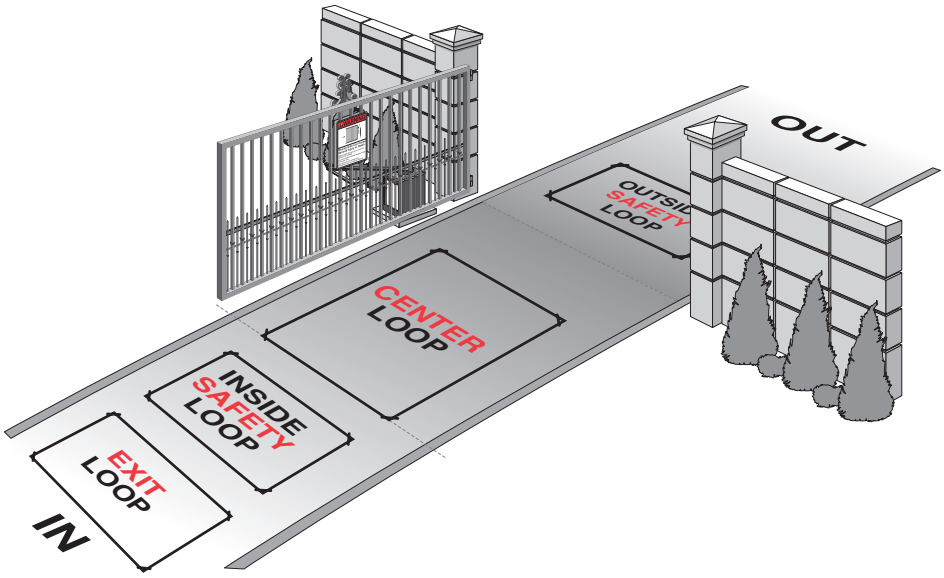
Twisted wires must be 6 turns per foot ***"Minimum"***

Wire-Loop "Center Loop"

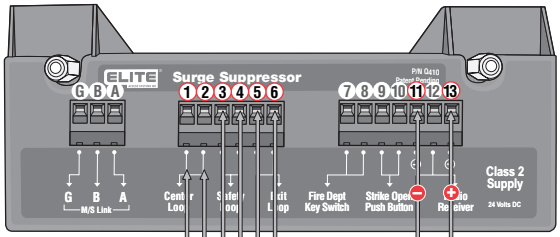
Wire-Loop "Safety Loop"

Wire-Loop "Exit Loop"

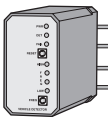
Elite Plug-In Loop detectors needed to perform this function.
Part # **AELD**



Optional Product

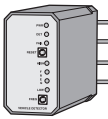


External 115 Vac "Center" Loop Detector - Allows gate to stay open when vehicles are obstructing path. ***Caution:*** This option is for all vehicles including ones less than 14' long. Center loop system requires two safety loops.

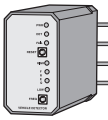


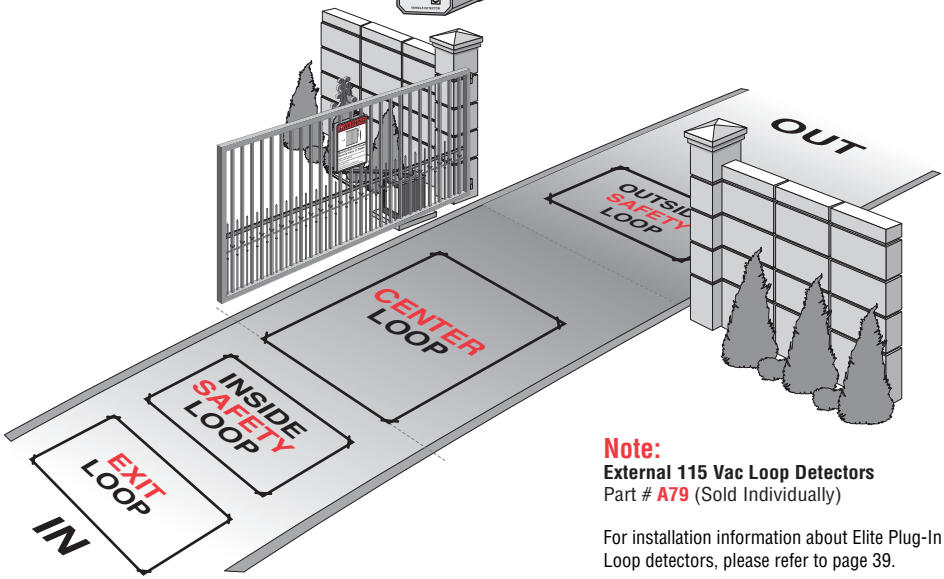
External 115 Vac "Safety" Loop Detector - Allows gate to stay open when vehicles are obstructing path. ***Caution:*** Suggested for vehicles 14 feet or longer. If a vehicle is shorter, a center loop system is recommended and should be installed.
If the ***"Inside"*** and ***"outside"*** safety loops are connected to the ***same*** loop detector:

- They should be series connected to the detector
- Have the same dimensions. (Page 41 or 42)
- Have the same number of wire turns. (Page 43)



External 115 Vac "Exit" Loop Detector - Allows gate to automatically open for exiting vehicles.





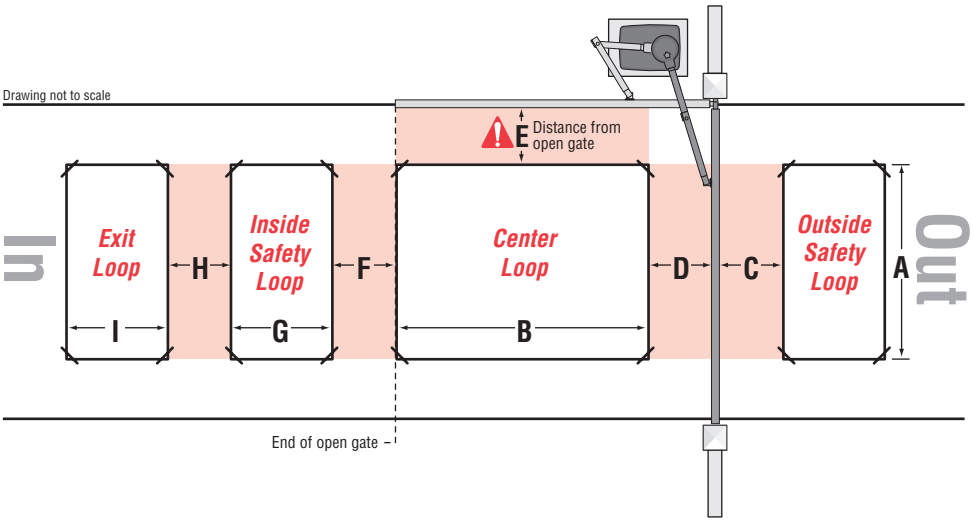
Note:
External 115 Vac Loop Detectors
Part # **A79** (Sold Individually)

For installation information about Elite Plug-In Loop detectors, please refer to page 39.

SINGLE OPERATOR LOOP SIZE AND PLACEMENT

It is *VERY* important to have enough separation between loops and gates to prevent false detection.

Caution: ***Distance "E" must be a minimum of 4 feet away from open gate!***



Outside Safety Loop:

If A =	6 Feet	9 Feet	12 Feet	15 Feet	18 Feet	21 Feet
Then C =	4 Feet	4.5 Feet	5 Feet	5 Feet	5.5 Feet	6 Feet

Center Loop:

This loop must have enough space between loop and gate when ***opened*** or ***closed***.

If driveway is **smaller** than 18 ft, then **D** must be 4.5 ft

If driveway is **bigger** than 18 ft, then **D** must be 5 ft

Caution: ***Verify if spacing "D and C" is appropriate for the installation and does NOT compromise safety.***

If B =	6 Feet	9 Feet	12 Feet	15 Feet
Then E =	4 Feet	4.5 Feet	5 Feet	5 Feet

Inside Safety Loop

If there is **no** center loop, then **F** 4 ft

If there is a center loop, then **F** = **B** or **G** which ever is largest.

Exit Loop

H = **G** or **I** which ever is largest.

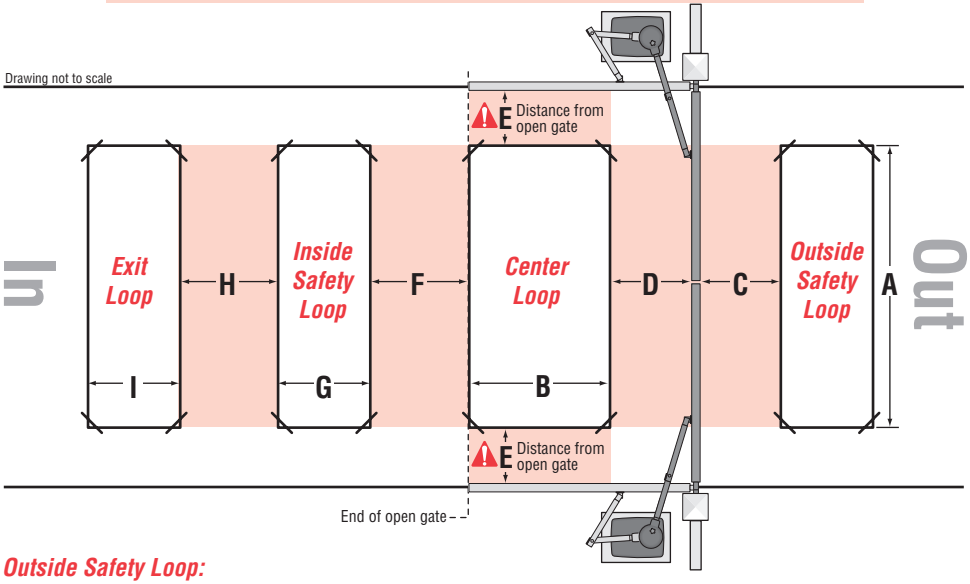
This is for a typical single CSW200UL™ loop installation. Individual circumstances may alter dimensions.

For technical support: **1-800-528-2806**

MASTER/SECOND LOOP SIZE AND PLACEMENT

It is *VERY* important to have enough separation between loops and gates to prevent false detection.

Caution: ***Distance "E" must be a minimum of 4 feet away from open gate!***



Outside Safety Loop:

If A =	6 Feet	9 Feet	12 Feet	15 Feet	18 Feet	21 Feet
Then C =	4 Feet	4.5 Feet	5 Feet	5 Feet	5.5 Feet	6 Feet

Center Loop:

This loop must have enough space between loop and gate when ***opened*** or ***closed***.
If driveway is **smaller** than 18 ft, then **D** must be 4.5 ft
If driveway is **bigger** than 18 ft, then **D** must be 5 ft

Caution: ***Verify if spacing "D and C" is appropriate for the installation and does NOT compromise safety.***

If B =	6 Feet	9 Feet	12 Feet	15 Feet
Then E =	4 Feet	4.5 Feet	5 Feet	5 Feet

Inside Safety Loop

If there is **no** center loop, then **F** 4 ft
If there is a center loop, then **F** = **B** or **G** which ever is largest.

Exit Loop

H = **G** or **I** which ever is largest.

This is for a typical master/second loop installation. Individual circumstances may alter dimensions.

For toll free technical support: **1-800-528-2806**

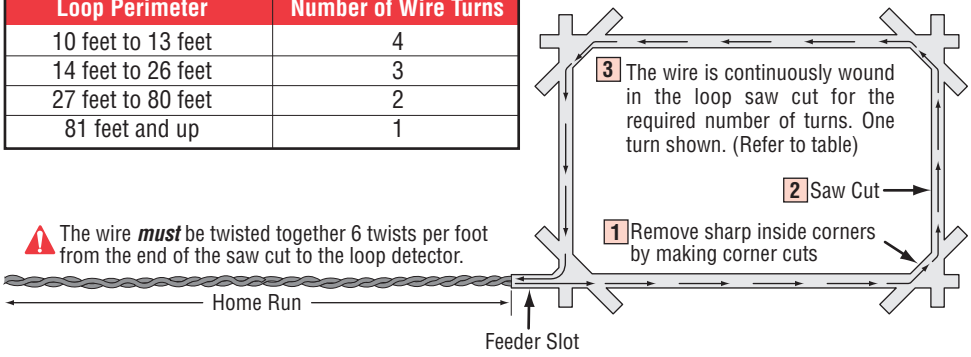
Loop Installation "Saw Cut" Type

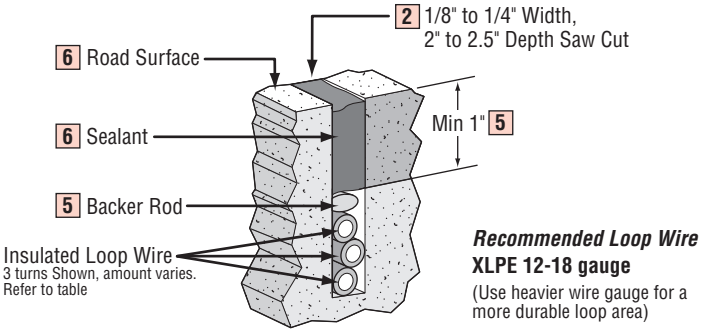
1. Mark the loop layout on the pavement. Remove sharp inside corners that can damage the loop wire insulation.
2. Set the saw to cut to a depth (typically 2" to 2.5") that insures a minimum of 1" from the top of the wire to pavement surface. The saw cut width should be larger than the wire diameter to avoid damage to the wire insulation when placed in the saw slot. Cut the loop and feeder slots. Remove all debris from the slot with compressed air. Check that the bottom of the slot is even.
3. It is highly recommended that a continuous length of wire be used to form the loop and feeder to the detector. It is also highly recommend using 12-18 AWG cross-link polyethylene (XLPE) insulation for the loop wire. Use heavier wire gauge for a more durable loop area. Use a wood stick or roller to insert the wire to the bottom of the saw cut (Do not use sharp objects). Wrap the wire in the loop saw cut until the desired number of turns is reached. Each turn of wire must lay flat on top of the previous turn.
4. The wire must be twisted together a minimum of 6 twists per foot from the end of the saw cut to the detector.
5. the wire must be held firmly in the slot with 1" pieces of backer rod every 1 to 2 feet. This prevents the wire from floating when the loop sealant is applied.
6. Apply the sealant. The sealant selected should have good adhering properties with similar expansion and contraction characteristics to that of the pavement material.

Number of Wire Turns Needed for Loop

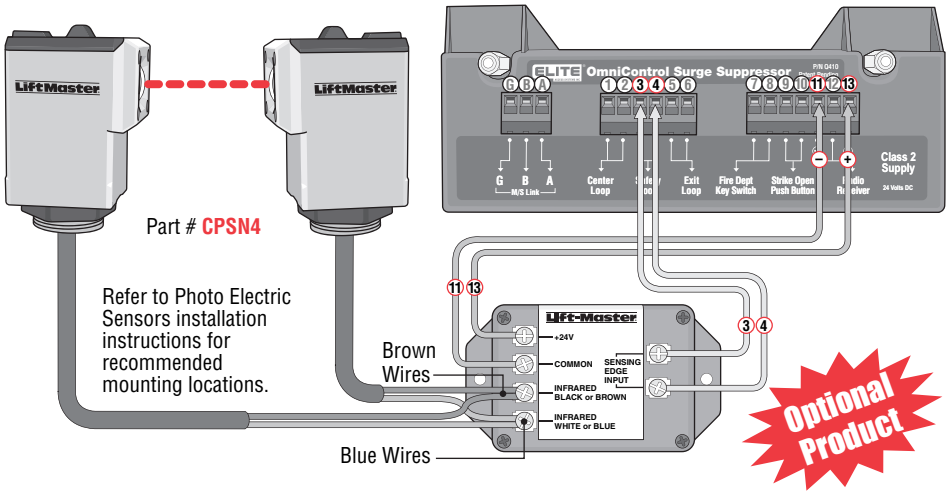
Important

Loop Perimeter	Number of Wire Turns
10 feet to 13 feet	4
14 feet to 26 feet	3
27 feet to 80 feet	2
81 feet and up	1


3 The wire is continuously wound in the loop saw cut for the required number of turns. One turn shown. (Refer to table)
2 Saw Cut
1 Remove sharp inside corners by making corner cuts
The wire must be twisted together 6 twists per foot from the end of the saw cut to the loop detector.
Home Run
Feeder Slot

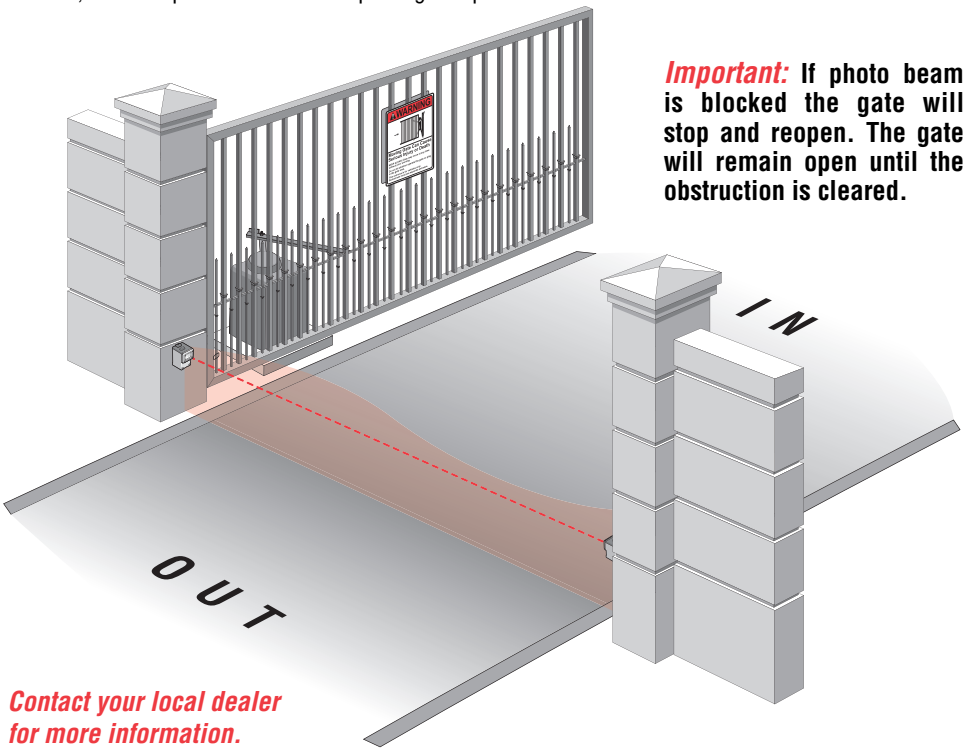

2 1/8" to 1/4" Width, 2" to 2.5" Depth Saw Cut
6 Road Surface
6 Sealant
5 Backer Rod
Insulated Loop Wire
3 turns Shown, amount varies. Refer to table
Min 1" 5
Recommended Loop Wire
XLPE 12-18 gauge
(Use heavier wire gauge for a more durable loop area)

OPTIONAL PHOTO SENSORS "SAFETY" CONNECTION



It is best to use Failsafe Photo Electric Sensors for this Safety Option

Failsafe Photo Sensors: If a failsafe photo sensor is not working or loses power or photo beam is blocked, then the photo beam will stop ***all*** gate operation.



Important: **If photo beam is blocked the gate will stop and reopen. The gate will remain open until the obstruction is cleared.**

Contact your local dealer for more information.

Secondary Entrapment Protection (Non-Contact Sensor)

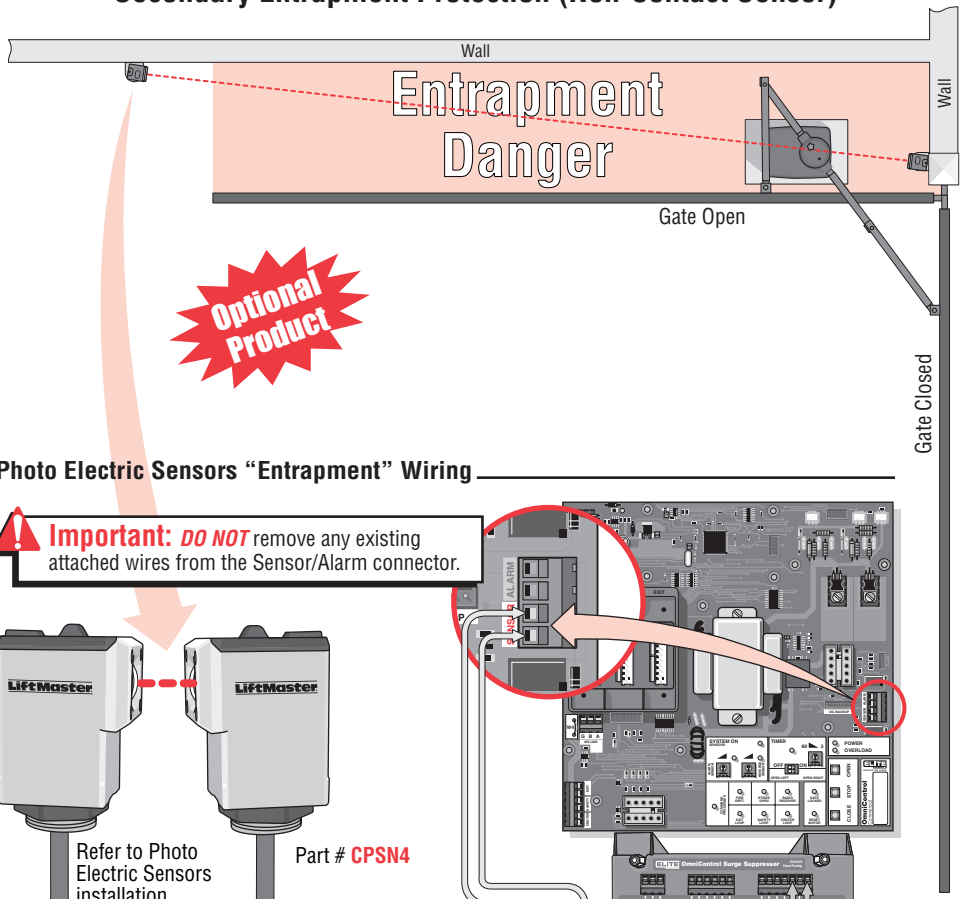
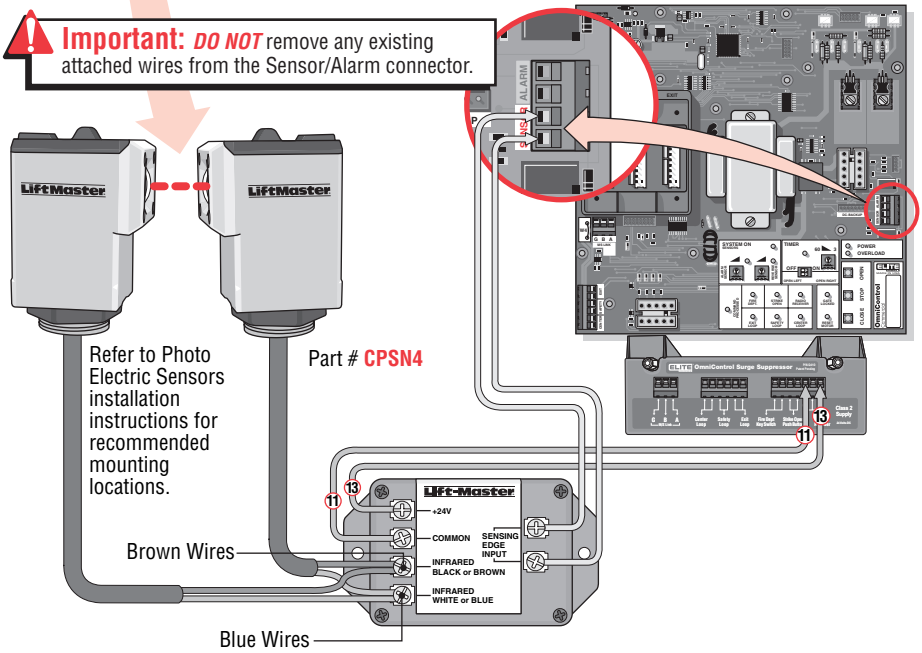


Photo Electric Sensors "Entrapment" Wiring

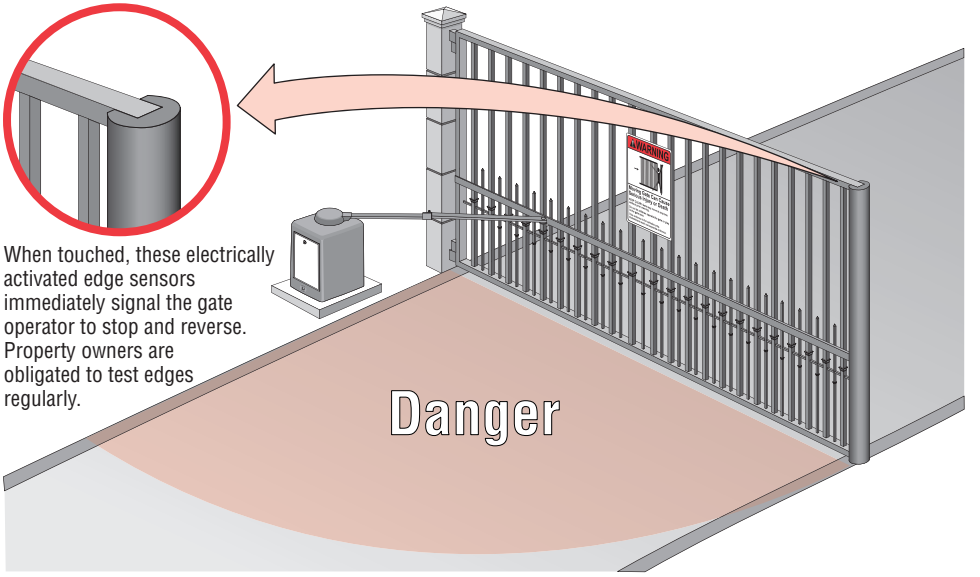
Important: ***DO NOT*** remove any existing attached wires from the Sensor/Alarm connector.



Note: If multiple pairs of sensors are being used, all of the sensor wires are to be connected in parallel at the **Sensor Input** on the OmniControl™ board.

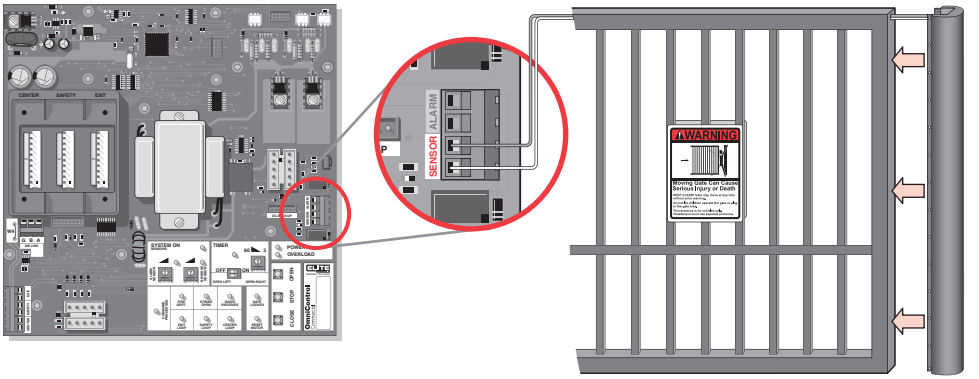
If you are going to use a non-contact sensor as a secondary entrapment protection you should use a recognized component to comply with the revised UL 325 intended to be used in class I or class II gate operator.

Secondary Entrapment Protection (Contact Sensor)



When touched, these electrically activated edge sensors immediately signal the gate operator to stop and reverse. Property owners are obligated to test edges regularly.

Edge Sensor Wiring



Important: ***DO NOT*** remove any existing attached wires from the Sensor/Alarm connector.

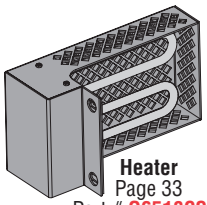
Optional Product

UL Listed Edge Sensor
Part #s **G65MGO20**
G65MGR20
G65MGS20

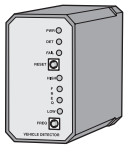
Note: If multiple sensors are being used, all of the edge sensors are to be connected in parallel at the **Sensor Input** on the OmniControl™ board.

If you are going to use a contact sensor as a secondary entrapment protection you should use a recognized component to comply with the revised UL 325 intended to be used in class I or class II gate operator.

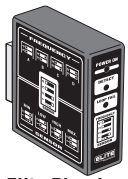
OPTIONAL PRODUCTS



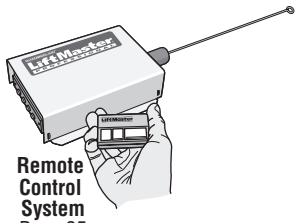
Heater
Page 33
Part # **G6518CSW**



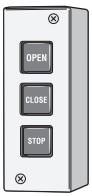
External Loop Detectors
Page 40
Part # **A79**



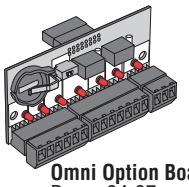
Elite Plug-In Loop Detectors
Page 39
Part # **AELD**



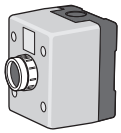
Remote Control System
Page 25



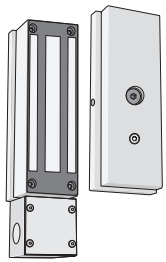
3 Push Button
Page 31, 36
Part # **02-103**



Omni Option Board
Pages 34-37
Part # **OOMNIEXB**



Stop Button
Page 36
Part # **AEXITP**



Elite Maglocks
Page 37
Page 38
Page 28

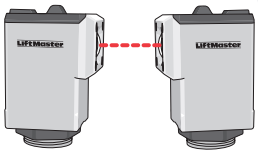
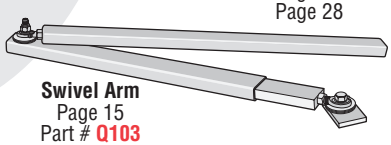
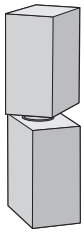


Photo Electric Sensors 12V
Page 44 and 45
Part # **CPSN4**

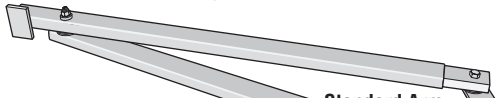


Swivel Arm
Page 15
Part # **Q103**

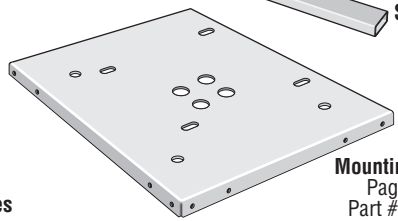
DC-2000 BackUp System
Pages 30-32
Part # **ODC2000CSW**



Elite Power Hinges



Standard Arm
Page 12
Part # **Q104**



Mounting Plate
Page 15
Part # **MPEL**

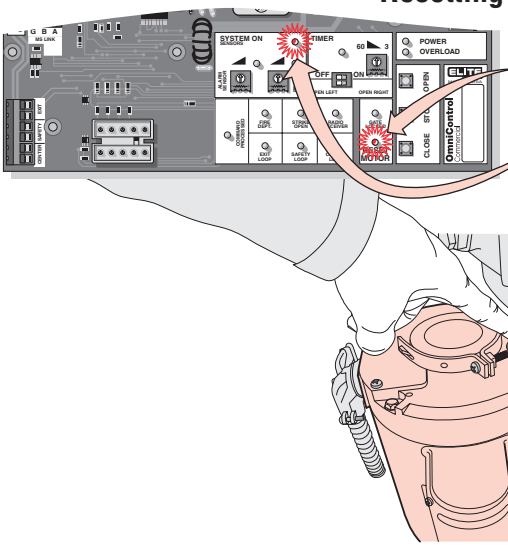
Optional Products

TROUBLESHOOTING TABLE

Condition	Possible Causes	Solution
Overload LED ON and Power LED OFF	*1.* Short circuit at terminals 11 and 13 *2.* Short circuit at any of the loop detectors in the board *3.* Short circuit in the control board	*1.* Remove the short circuit condition at the terminals *2.* Remove the defective loop detector *3.* Send the board to repair
Overload LED On and Power LED On	*1.* Excessive current draw at terminal 13 *2.* Over-voltage at the 110 Vac line input	*1.* Reduce the accessories load from surge suppressor terminal 13 *2.* Verify your electrical power
System On LED Flashing	*1.* One limit switch is faulty (Rapid Flashing) *2.* Motor thermal fuse has popped-out (Slowly Flashing)	*1.* Test the limit switches and wire connections, fix the fault *2.* Reset the motor
Reverse Sensor LED On	*1.* Gate has encountered an obstruction during traveling *2.* Reverse sensor is extra sensitive	*1.* Remove the obstruction *2.* Turn the reverse sensor switch counter clockwise a little more and try again
Alarm Sensor LED On	*1.* Gate encountered an obstruction during traveling *2.* Alarm sensor is extra sensitive	*1.* Remove the obstruction *2.* Turn the alarm sensor switch counter clockwise a little more and try again
Command Processed LED On	*1.* There is a command hold active	*1.* This is a normal response of the gate operator. It does not represent necessarily that there is a problem.
Timer LED Blinking and Command Processed LED Blinking	*1.* There is a command holding the gate open	*1.* This is a normal response of the gate operator. It does not represent necessarily that there is a problem. Check inputs for command.
Timer LED Blinking, Command Processed LED Blinking and Reverse Sensor LED On	*1.* Gate has reopened because it encountered an obstruction while closing.	*1.* Any re-new command will resume normal operation. Check for obstructions.
Audio Alarm On	*1.* Gate has encountered two consecutive obstructions while trying to close or open	*1.* Any re-new command will resume normal operation but not a radio command. Check for obstructions. *2.* You can stop the alarm by using the built-in reset button. *3.* You can stop the alarm by using an optional stop button.
Any "Loop LED" On and No Vehicle on the Sensing Area	*1.* The loop detector needs to be reset. *2.* The wire loop has been disrupted *3.* The loop detector needs to work in a different frequency *4.* The loop detector is too sensitive	*1.* Reset the loop detector (If you use Elite Plug-in Loop detectors, change the setting for sensitivity and come back to your original setting). *2.* Verify and correct connections *3.* Set a different working frequency *4.* Decrease the sensitivity of the loop detector

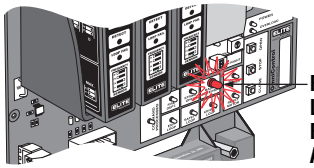
For Technical Support: **1-800-528-2806**

Resetting Motor

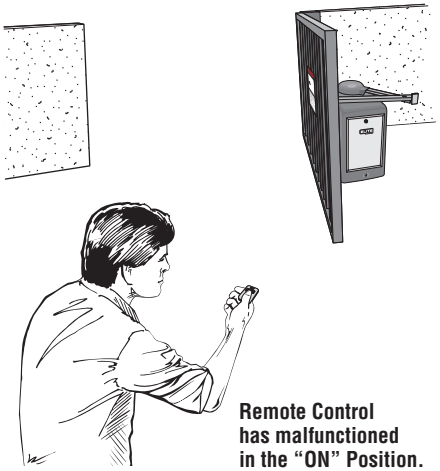


Press firmly to reset thermal breaker on the motor.

Gate Will Not Close with Remote!

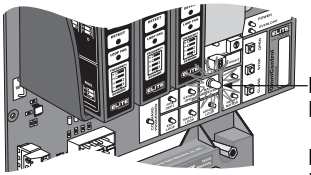


Radio Reciever LED Light Remains *"ON"* Always



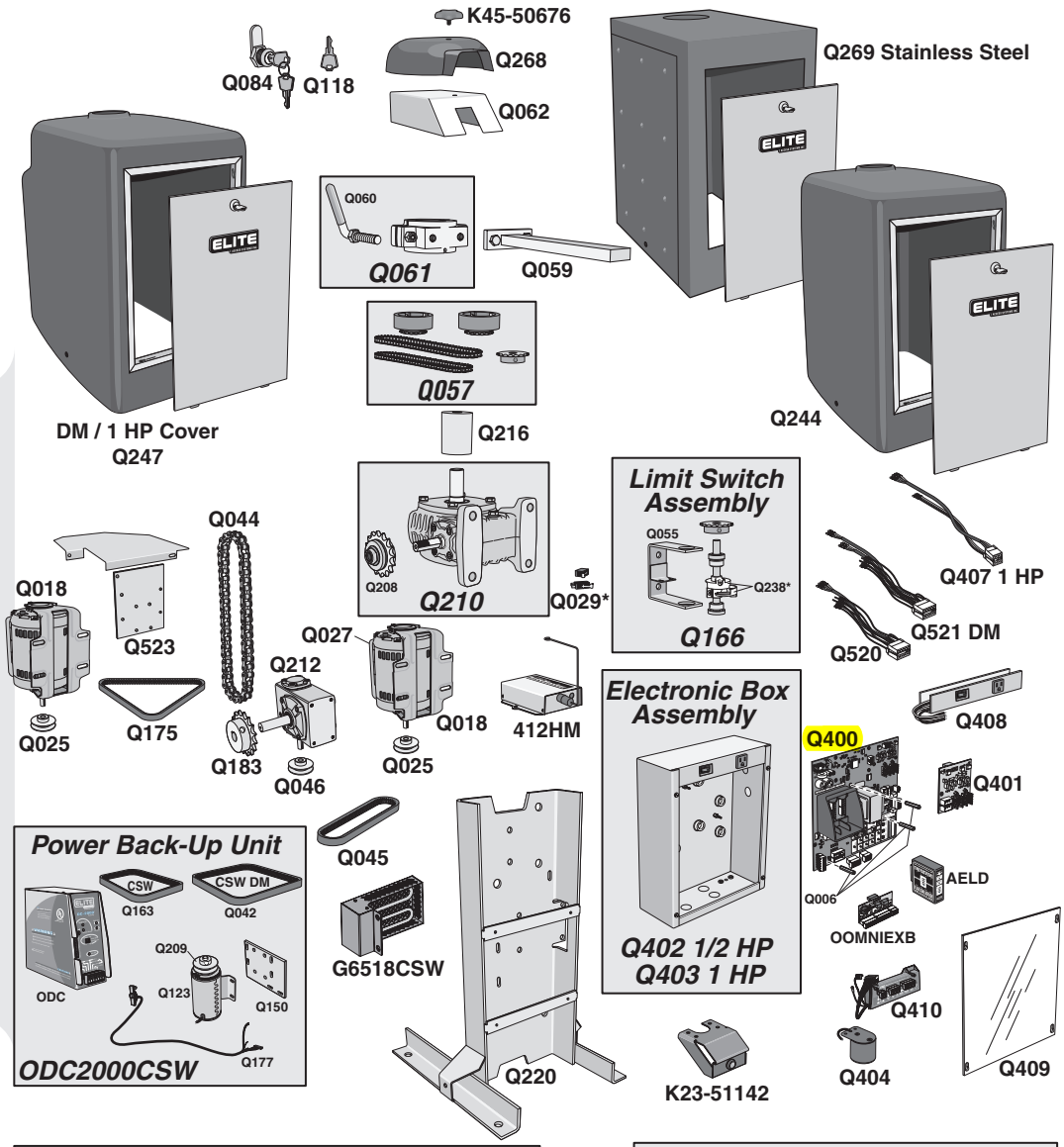
Remote Control has malfunctioned in the "ON" Position.

Gate Will Not Open with Remote!



Radio Reciever LED Light is *"NOT ON"* when Remote Control is Activated

Radio Receiver in the Gate Operator has malfunctioned in the "OFF" Position.



Note: *Sold Individually, 2 Shown

CSW200UL™ PARTS LIST

Cludge Assembly
Q061
- Q060 - Arm Release Handle
- Q061 - Output Shaft Cludge (T)

Sprocket and Chain Kit
Q057
- 1 1/8" dia. sprocket fits size 70 gear box
- 1" dia. sprocket fits size 60 gear box
- Sprocket #35
- Chain #35-72 links
- Chain #35-68 links

Swivel Arm
Q103
- Q198 - Swivel Only
- Q256 - Solid Arm, Swivel, and Gate Connector

Limit Switch Assembly
Q166
- Q055 - Limit Switch Holder
- Q238 - Gate Adjustment Limit Cam (Plastic Part)

Gear Box Assembly (Size 70)
Q210+ Q208 - Clutch Set (Post 10/95)

Electronic Box Assembly
Q402 1/2 HP **Q403 1 HP**

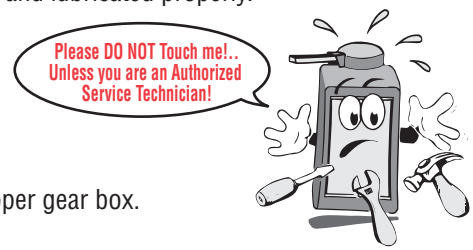
Power Back-Up Unit
ODC2000CSW
- Q042 - Drive Belt DC CSW (DM)
- Q123 - Back-Up Motor DC 12V
- Q150 - Chassis DC Back-Up
- Q151 - Hardware Kit for DC Back-Up
- Q163 - Drive Belt DC CW 4L240
- Q177 - Wire Harness DC-2000
- Q209 - Pulley DC1000 1/2 ID

☐ Multiple Parts "Q" Numbers
OmniControl Board Accessories
+ Operator Serial No. and Model No. Required When Ordering

412HM - Radio Receiver
AELD - Plug-In Loop Detector#
G6518CSW - Heater
K45-50676 - Star Knob
K23-51142 - Reset Button Assembly
OOMNIEXB - Omni Option Board#
Q006 - PC Board Nuts (Set)
Q018 - 1/2 HP Electric Motor
Q019 - Control Board Non UL (Not Shown)
Q025 - Motor Pulley (ID5/8)
Q027 - Motor Capacitor
Q029 - Limit Switch
Q044 - Chain No. 50
Q045 - Drive Belt 1/2 HP 4L190
Q046 - Gear Reducer Pulley
Q059 - Output Arm Solid
Q062 - Cludge Cover - Stainless Steel
Q084 - Emergency Key Release
Q104 - CSW Arm Package
Q118 - Key for Access Door
Q175 - Belt UL DM/1 HP
Q183 - Sprocket (B50-16)
Q212 - Gear Reducer 40-30:1
Q216 - Output Shaft for 70 Reducer+
Q220 - CSW200UL™ Chassis for 70 Reducer+
Q244 - Cover - HD Polyethylene
Q247 - Cover - DM HD Polyethylene
Q268 - Cludge Cover - Plastic
Q269 - Stainless Steel Cover
Q400 - Omni Main PCB
Q401 - Omni 1 Horsepower Board#
Q404 - Omni Alarm
Q407 - Omni Motor Harness 1 HP
Q408 - Electronic Power Strip
Q409 - Electronic Access Panel
Q410 - Surge Suppressor Terminal Block
Q520 - Omni Motor Harness
Q521 - Omni Motor Harness DM

MAINTENANCE

1. The gate area should be kept clean to insure proper operation.
2. Make sure the hinges are working smoothly and lubricated properly.
3. Make sure gate arm is greased properly.
4. Keep the cover clean.
5. Check belt for cracking, looseness or wear.
6. Check gate reversing sensor.
7. Check for proper clutch adjustment.
8. Check for proper synthetic oil level in the upper gear box.
(Mobil 10W-30 weight synthetic oil)
9. For parts, refer to CSW200UL™ Illustrations page and this page.



If you need further assistance, please call your local service company.

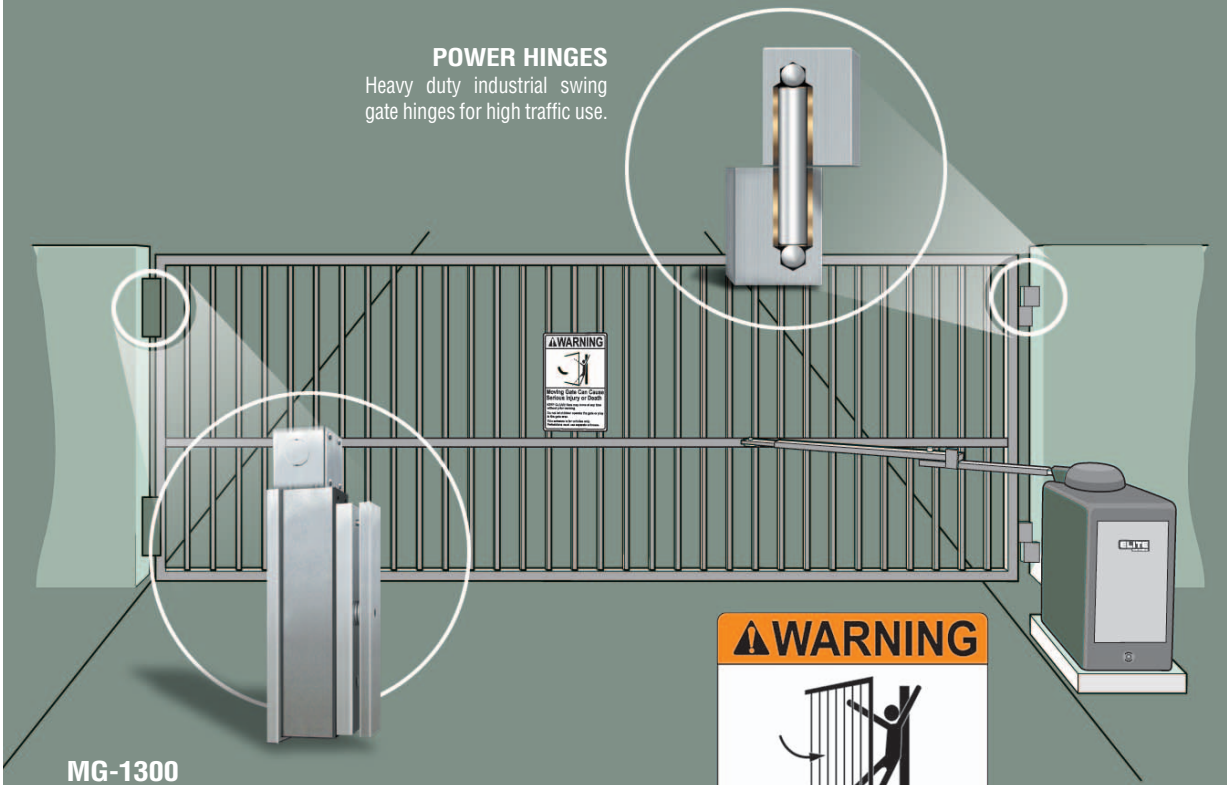
Property Owners Checklist of Installation

1. ☐ Property owner and Installer must read all warnings and safety precautions and be aware of their roles and responsibilities. (Pages 4-11)
2. ☐ Make sure mounting pad is big enough and deep enough for operator. (Page 12-15)
3. ☐ Operator must be ***securely*** fastened to concrete pad or mounting plate. (Page 12-15)
4. ☐ Operator arm must be ***level*** and welded properly to gate. (Page 16)
5. ☐ Rectangular tubes on operator arm must be ***completely*** welded around. (Page 16)
6. ☐ When gate is pulled, ***No*** slippage of operator arm should occur. (Page 17)
7. ☐ Gate operator must be grounded to an earth ground rod within 3 feet. (Page 18)
8. ☐ Verify that the AC power is connected properly and ***Property Owner*** knows how to shut off power to operator. (Page 18)
9. ☐ Verify that the gate opens and closes as needed. (Page 20)
10. ☐ When gate hits object during operation, it ***must*** stop or reverse. (Page 22)
11. ☐ ***Know how to operate the emergency release.*** (Page 29)
12. ☐ Make sure that any pinch point or potential entrapment are guarded by means of safety devices or like. (Page 44-46)
13. ☐ Warning placards need to be permanently mounted on ***both*** sides of gate. (Page 21)
14. ☐ Test all additional equipment connected to operator.
15. ☐ Make sure ***all*** wire connections are ***securely*** fastened.
16. ☐ Review typical maintenance on operator. (Page 51)
17. ☐ Schedule periodic maintenance on operator by qualified service technician.
18. ☐ Inquire about Manufacturers *"operator warranty".* (Warranty Card Included with operator)
19. ☐ Inquire about ***separate*** *"installation warranty"* with installer.

FEATURES AND SPECIFICATIONS

We suggest the following items manufactured by Chamberlain Professional Products for better and safer operations.

POWER HINGES
Heavy duty industrial swing gate hinges for high traffic use.



MG-1300 MAGNETIC LOCKS
Offering up to 1300 pounds of holding force and an attached junction box.

WARNING SIGNS
Use a warning sign on gate to prevent injury to children.

WARNING
Moving Gate Can Cause Serious Injury or Death
KEEP CLEAR! Gate may move at any time without prior warning.
Do not let children operate the gate or play in the gate area.
This entrance is for vehicles only. Pedestrians must use separate entrance.

To insure a strong gate installation, weld a horizontal bar across the entire gate. Then weld the arm attachment onto the bar.

845 larch avenue elmhurst, illinois 60126-1196